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GENERAL STUDIES (TEST CODE : 1835)

Name of Candidate	POURUSH SOOD		
Medium Eng./Hindi	ENGLISH	Registration Number	1175138
Center	ONLINE	Date	

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
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9	10	
10	10	
11	15	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (v
Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्या
क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicat
against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in t
Admission Certificate, which must be stated clearly on t
cover of this Question-Cum-Answer (QCA) Booklet in the spa
provided. No marks will be given for answers written
medium other that the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आप
प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्ले
प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थ
पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्
में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Questio
Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप
काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. The withdrawal of general consent to the CBI by certain state governments in India threatens the spirit of cooperative federalism in India. Discuss. **(150 words) 10**

भारत में कुछ राज्य सरकारों द्वारा सी. बी. आई. से सामान्य सहमति वापस लेना भारत में सहकारी संघवाद की भावना के लिए खतरा उत्पन्न करता है। चर्चा कीजिए।

The Central Bureau of Investigation is a central body that derives its powers from the Delhi Special Police Establishment Act 1946, with a mandate to investigate crimes related to corruption, heinous crimes like rape, etc.

The issue of General Consent

→ The CBI can investigate cases inside the states' jurisdiction with the concerned states consent.

→ This consent is assumed, unless the state withdraws it otherwise

→ Many states, especially with opposition governments to the ruling party in the

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centre, have withdrawn general consent.

Why it threatens the spirit of cooperative federalism

→ Centre-State tussles are exposed : Since withdrawal is seen in opposition ruled states.

→ Politicization of CBI: The accusation of states that CBI acts in a partisan, biased manner is not unfounded. eg. West Bengal has accused CBI of favouring central ruling party.

→ Investigations, especially inter-state become difficult, especially in crimes that cross state borders.

→ Overinterference of judiciary to assign cases from states to the CBI (eg. Sushant Singh Rajput case) does not bode well for cooperative federalism.

The Lodha Committee has described CBI as a 'Caged Parrot'. Unbiased investigations by CBI and cooperation from states is a must to preserve the federal spirit.

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2. Stating the sources of finance for local self-governments in India, suggest ways to strengthen their financial position. **(150 words) 10**

भारत में स्थानीय स्व-शासी सरकारों के लिए वित्त के स्रोतों का उल्लेख करते हुए, उनकी वित्तीय स्थिति को मजबूत करने के उपाय सुझाइए।

The local self-government bodies, constitutionalised in India by the 73rd and 74th amendments (1993) suffer from financial handicaps despite statutory devolutions.

Sources of Finance

1. Devolution of finance from state Finance Commissions
2. Grants from the centre as per Finance Commission Recommendations. (tied + untied)
3. Taxation powers:
   - Eg. conservancy, ferry charges, etc.
   - Powers to Panchayats and Municipal Bodies of taxation
4. For Municipal Bodies, additionally:
   - loans
   - Municipal Bonds (eg. Ahmedabad tried this)
5. Grants from states

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⑥ Grants by centre to implement centrally sponsored schemes.

Strengthening Financial Devolution

① Increasing vertical tax devolution (eg. the State Finance Commission of Kerala allots ~33% of revenue to local bodies

② Utilizing taxation powers: Many Panchayats refrain from taxing their own people.

③ Municipal bonds for urban local bodies, easier access to loans, etc.

④ Higher level of untied grants from centre and state.

⑤ Devolving more subjects of XI, XII schedule along with their finances.

⑥ Compulsory component of GST collections (say 1%) allotted to local bodies.

The hands of local bodies are tied with little autonomy and tied grants. True decentralization will involve financial autonomy as well.

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3. Cabinet Committees play an important role in reinstating collective responsibility and principle of homogeneity of the Executive in the Indian Parliamentary system. Elucidate. (150 words) 10

भारतीय संसदीय प्रणाली में मंत्रिमंडलीय समितियां सामूहिक उत्तरदायित्व और कार्यपालिका की एकरूपता के सिद्धांत को बहाल करने में महत्वपूर्ण भूमिका निभाती हैं। स्पष्ट कीजिए।

Cabinet Committees are High Powered Committees of Ministers of the executive that help expedite decision making and promote collective responsibility and homogenity in Executive decision making.

Eg. Cabinet Committee on Economic Affairs, Parliamentary Affairs, etc.

Role of Cabinet Committees (CC)

→ Promote Collective Responsibility

① Prevent concentration of absolute power in a cabinet minister or the Prime Minister

eg. CC on Economic Affairs has other members also, other than the Finance Minister.

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(2) Ministers exercise their will of advise and suggestions to government policy.

(3) Help in assuming collective accountability to decisions

→ Promote homogenity

(1) Synchronization between dimensions of government policy : Due to involvement of various ministers.

(2) Common policy frameworks eg. coordination between Ministry of Commerce and Industry and Finance through CC on Economic Affairs.

(3) Allow the "big picture" to be visible through multiple viewpoints and stakeholders.

Hence Cabinet Committees play a major role in upholding collective responsibility and synchronised decision making in executive.

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4. There is a need to overhaul the public procurement and project management (PPPM) framework of India for faster, efficient and transparent execution of government projects. Comment.

(150 words) 10

सरकारी परियोजनाओं के तीव्र, कुशल और पारदर्शी निष्पादन के लिए भारत के सार्वजनिक खरीद और परियोजना प्रबंधन (PPPM) ढांचे में सुधार की आवश्यकता है। टिप्पणी कीजिए।

Public Procurement and Project Management refers to the handling of goods and service purchases by public agencies and evaluation and monitoring of projects undertaken by them.

Current limitations in PPPM framework

→ Lack of transparency
Due to → Insufficient digitization
→ Improper documentation

→ Corruption often goes unnoticed
→ Evasion from RTI requests
→ Partisan nature of vigilance agencies

Procurement Models

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↳ The 'Least cost' model often leads to substandard assets.

→ Lax Project Management
- ↳ Outdated ERP systems
- ↳ Not accounting for delays and cost overruns in planning stage.

Way Forward

① Digitization
- → Procurement systems (eg. GeM)
- → Open online auctions
- → State of art ERP systems
- → Use of Public Financial Management Systems (PFMS)

As per 2nd ARC, 1% of all schemes' budget should be reserved for RTI and documentation

② Teeth to vigilance commissions, Lokpal, etc.

While the government has taken laudable steps to overhaul the procurement system (eg. GeM), there is a scope for improvement in the Project Management side.

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5. Adequate measures are required to overcome the challenges and vulnerabilities associated with undertaking social accountability initiatives and institutionalising them. Elaborate. **(150 words) 10**

सामाजिक जवाबदेही पहलों को शुरू करने और उन्हें संस्थागत बनाने से जुड़ी चुनौतियों और कमजोरियों को दूर करने के लिए पर्याप्त उपायों की आवश्यकता है। सविस्तार वर्णन कीजिए।

Social Accountability initiatives involve the evaluation of government's public service delivery on a common platform by the society in general. eg. social audits.

Challenges and Vulnerabilities

① Awareness: There is a lack of general awareness about government schemes for adequate public hearings and social audits.

↳ Many laws are drafted in non-native languages of regional speakers

② Digital Divide: Lack of smartphones, internet access hampers ensuring accountability in Financial Inclusion and eGovernance

③ Political interference and use of muscle

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power, especially in rural areas, to coax the public into silence

④ Redtapism and inefficient bureaucracy

Measures Needed

① Statutory Backing of social audits for most large schemes.

② Video recording of public hearings

③ Involvement of independent experts in public hearings

④ Use of technology, eg. e-surveys, feedback forms, etc. for more transparent social reviews.

⑤ Availability of laws in native languages

⑥ Improving financial inclusion and reducing digital divide.

⑦ GPS tagging of scheme assets, and availability of so on apps.

Rajasthan is trying to bring a statutory backing to social audit, like Meghalaya. Other states must follow suit.

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6. In view of the recent Parliamentary Standing Committee report, discuss the issues faced by the National Commission for Scheduled Tribes (NCST) and suggest measures that can be adopted to strengthen it. **(150 words) 10**

एक संसदीय स्थायी समिति की हालिया रिपोर्ट को ध्यान में रखते हुए, राष्ट्रीय अनुसूचित जनजाति आयोग (NCST) द्वारा सामना किए जाने वाले मुद्दों की विवेचना कीजिए और इसे मजबूत बनाने के लिए अपनाए जा सकने वाले उपायों का सुझाव दीजिए।

The National Commission for Scheduled Tribes, established by Article 338-A of the constitution, aims to safeguard the interests of the ST population (~8%) of the country.

Issues faced by the NCST

① Vacancy: As with many central government commissions and tribunals, vacancies continue to persist in NCST, hampering administrative efficiency.

② Lack of discussions and meetings: Especially during and post COVID-19.

③ Lack of reports: Hardly any reports and

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recommendations have been published in the last few years, especially since COVID-19.

(4) Partisan nature: As accused by forest rights groups of being partisan towards the ruling party.

How to strengthen the NCST

(1) Fill up the vacancies and increase the number of members.

(2) Statutory requirement of number of sittings and meetings in a year.

(3) Coordination with state Tribal Welfare committees for successful implementation of Forest Rights Act, 2006.

(4) Digitization: ~~Sto~~ of records, meetings, etc.

The NCST, with the aforementioned reforms, can truly empower one of the most vulnerable and historically wronged sections of India.

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7. While the Mid-Day Meal scheme was aimed at fulfilling the nutritional needs of students, it is far behind in achieving this objective. Discuss. Also, suggest remedial measures in this context. **(150 words) 10**

यद्यपि मध्याह्न भोजन योजना का उद्देश्य छात्रों की पोषण संबंधी आवश्यकताओं को पूरा करना था, किंतु इस उद्देश्य को प्राप्त करने में यह काफी पीछे है। चर्चा कीजिए। साथ ही, इस संदर्भ में उपचारात्मक उपायों का सुझाव दीजिए।

The Mid-Day Meal Scheme aimed to achieve the twin objectives of child literacy as well as food and nutritional security of children. However, it has had its limitations.

Limitations

→ Corruption: Corruption has led to diversion of food, funds and functionaries, and has hampered the quality of food (eg. in a recent case in U.P., children were given salt and roti as meal)

→ Inadequate nutrition: Fruits, pulses and vegetables are usually missing from the diet which is mostly carbohydrate

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- based.

→ Impact of COVID-19: Many states were lax in implementation of financial aid, home delivery of mid-day meals or uncooked ration delivery during COVID-19 lockdowns.

Remedial Measures

→ Social Audits: Involvement of parents as "one parent - one mess inspection" per day, regular social audits.

→ Use of technology: To publish centralized food menus with grievance redressal if there is an inconsistency.

→ Procurement of eggs, pulses, fruits and vegetables

→ Stress on nutritional security over food security.

The POSHAN 2.0 Abhiyaan is the right step towards India's nutritional security.

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(इस भाग में कुछ ना लिखें)

8. Sexual and reproductive health and rights (SRHR) remain critical for the attainment of the Sustainable Development Goals (SDGs). In this context, discuss the impediments in the fulfilment of SRHR in India. Also, mention the steps that can be taken in this regard. **(150 words) 10**

सतत विकास लक्ष्यों (SDGs) की प्राप्ति के लिए यौन एवं प्रजनन स्वास्थ्य और अधिकार (SRHR) महत्वपूर्ण हैं। इस संदर्भ में, भारत में SRHR की प्राप्ति में आने वाली बाधाओं पर चर्चा कीजिए। साथ ही, इस संबंध में उठाए जा सकने वाले कदमों का भी उल्लेख कीजिए।

Sexual and reproductive rights (SRHR) include the right to contraceptive access, sex education, access to sanitary pads, among others.

Impediments to fulfilment of SRHR

① Social Reasons

- Reproductive health is considered a taboo topic in Indian society
- In Meghalaya, there are cases of menstruating women being excluded from household while on periods
- Lack of sex education, information about contraceptives, etc.
- Lack of welfare schemes for pads and contraceptive distribution

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② Economic Reasons

- It is rightly said that "Development is the best contraception"
- Lack of resources to gain SRHR awareness and education
- Unaffordability of vasectomy, tubectomy, etc. ~~for~~ in many states.

Steps that can be taken

① Awareness

- Through sex education curriculum in schools
- Contraceptive awareness drives in villages
- Educating and empowering women to call for family planning.

② Social Schems

- Distribution of sanitary pads
- Contraceptive distribution

Investing in SRHR will not only help India in population control but will also help reduce Maternal Mortality, unsafe abortions etc.

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9. State the functions of the United Nations Human Rights Council. Also, discuss the issues faced by the Council in the promotion and protection of human rights around the globe. **(150 words) 10**

संयुक्त राष्ट्र मानवाधिकार परिषद के कार्यों का उल्लेख कीजिए। साथ ही, विश्व भर में मानवाधिकारों को बढ़ावा देने और उनके संरक्षण में परिषद द्वारा सामना किए जाने वाले मुद्दों की विवेचना कीजिए।

The United Nations Human Rights Council is a multilateral body that aims to protect human rights across the world. India has been elected to the UNHRC for the second time in a row for 3 more years.

Functions

① Inquire into human rights violations in countries
↳ Eg. Rwandan Genocide
Uighur Issue in China

② Help in implementation of treaties like UN Convention on Protection of Civil Rights, etc.

③ Investigate into human right violations by aggressor countries eg. Russia's invasion in Ukraine

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(4) Publish reports, status and indices of human rights across the world.

(5) look into human rights protection frameworks and laws in different countries.

Issues Faced

(1) Members: Regular human rights violators like China and Russia continue to be members of UNHRC, which does not augur well to its integrity.

(2) Political Interference and Funding: Regularly used to sway resolutions in favour of violating countries eg. China.

(3) No powers to prosecute: Eg. UNHRC did little to prevent Russian atrocities in Ukraine.

(4) Limited investigation powers

In the increasingly multipolar world, the UNHRC must stand firm on principles of humanism and ~~integr~~ impartiality to function effectively.

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10. West Asia is an important strategic region for India with profound geo-political and geo-economic significance. Discuss. **(150 words) 10**
अत्यधिक भू-राजनीतिक और भू-आर्थिक महत्व के कारण पश्चिम एशिया भारत के लिए एक महत्वपूर्ण रणनीतिक क्षेत्र है। चर्चा कीजिए।

West Asia and India together formed the "old world" with trade connections reaching as far as the Indus Valley Civilization.

[West Asia's Strategic Importance to India]

→ [ECONOMIC SIGNIFICANCE]

① Vast oil Reserves : India imports 85% of its crude oil requirements, majority from Iraq and Saudi Arabia.

② Bilateral Trade : India and UAE have flourishing trade with UAE being India's 3rd largest trading partner.

③ Source of Remittances : over a million Indians work in West Asian countries. West Asia formed 2nd largest source of remittances in 2021.

→ [CONNECTIVITY AND GEOPOLITICAL SIGNIFICANCE]

① Gateway to Afghanistan and Central Asia

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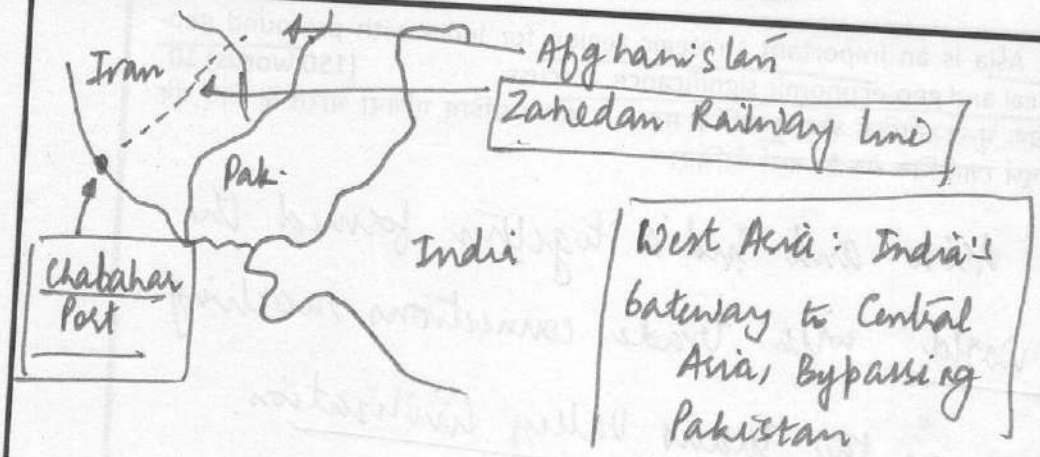

② INSTC transport corridor for trade with Russia and Central Asia

③ Countering China's influence in the region

→ STRATEGIC SIGNIFICANCE

① Defence relations : Especially with Israel, eg. the Iron Dome Technology

② Maritime exercises in Red Sea Region with UAE, Qatar, etc.

③ Balancing China through initiatives like I2U2, etc.

The recent FTA with UAE and the I2U2 grouping show that India is on the right track in its diplomacy with West Asia.

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11. Disenfranchising prisoners desecrates a cherished value in a democracy i.e. 'right to vote', which should be guarded earnestly. Discuss in the light of The Representation of The People Act, 1951. **(250 words) 15**

कैदियों को मताधिकार से वंचित करना वस्तुतः लोकतंत्र के एक प्रशंसनीय मूल्य, अर्थात् "मतदान के अधिकार" का अपमान करना है, जिसकी गंभीरतापूर्वक रक्षा की जानी चाहिए। लोक प्रतिनिधित्व अधिनियम, 1951 के आलोक में चर्चा कीजिए।

In India, the Representation of People Act 1951 does not allow any person in prison, whether undertrial or convicted, to exercise franchise. (except under preventive detention)

Why disenfranchising prisoners is problematic under RPA 1951.

① Treats all crimes equally: The clause does not differentiate in crimes. A person in jail for heinous or petty crime is disenfranchised.

② Does not differentiate between undertrials and convicts:

↳ 70% of people in jail in India are undertrial and hence "innocent until proven guilty".

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↳ They too are disenfranchised along with convicted prisoners.

③ Bail Issue

↳ People out on bail or parole can exercise their vote.

↳ Bail in India disproportionately affects the disadvantaged and poor, who do not have resources for surety bonds.

↳ Despite being granted bail, many of the poor continue to remain in prisons and hence are disenfranchised.

④ Against Universal Adult Franchise : Where age is the only bar to vote.

Way Forward

① Undertrials should be allowed to vote

↳ Sufficient voting infrastructure should be made available in prisons.

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(2) The RPA 1951 can be amended for allowing certain categories of convicts to vote, eg. those not convicted for heinous crimes.

(3) Manifestos, electronic speeches, etc should be made available in prisons to help in making an informed choice.

(4) If voting infrastructure cannot be made available in all prisons, electronic or postal ballots should be allowed.

The Right to vote is the bedrock of any democracy. The RPA 1951 in its current form is discriminatory towards the undertrials and disadvantaged ~~criminals~~ prisoners and must be amended.

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12. There are similarities and interactions between the affirmative action adopted by India and USA owing to similar historical injustices faced by their respective vulnerable groups. Discuss. (250 words) 15

भारत और यू. एस. ए. के सुभेद्य समूहों द्वारा सामना किए गए एकसमान ऐतिहासिक अन्याय के कारण, इनके द्वारा अपनाई गई सकारात्मक कार्रवाई के बीच समानताएं हैं और इनका एक-दूसरे पर प्रभाव पड़ा है। चर्चा कीजिए।

USA, the world's oldest democracy and India, the world's largest democracy have both adopted progressive policies to undo historical injustices done to vulnerable groups.

Historical Injustices

→ USA

① Against Blacks
- ⓐ Slavery
- ⓑ Racial discrimination
- ⓒ Biasness of judicial and police system against Blacks (still continues, eg. George Floyd Case)

② Against Women
- ⓐ Disenfranchisement
- ⓑ Inequality in pay

③ LGBTQ Individuals

Don't write anything this margin (इस भाग में कुछ ना लिखें)

ⓐ Societial discrimination
ⓑ Bullying, hate crimes, etc.

→ India
① Caste system
ⓐ Temple Entry issue
ⓑ Social / Economic Backwardness
② Women
ⓐ Dowry, domestic violence, crimes, etc.
ⓑ unequal pay
③ LGBTQIA people
ⓐ Discrimination

Similarities in affirmative Action

	India	USA
①	Abolition: of untouchability, dowry	Abolition: of slavery
②	Empowerment of women • Equal remuneration Act • Dowry Prohibition Act • Maternity Benefit Act • POSH Act	~~Legal~~ Equal remuneration for women, maternity benefits, etc.
③	LGBTQIA: Removal of Sec 377 Recognition of relationships	~~Attr~~ No discrimination against LGBTQIA individuals.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Differences

→ Enfranchisement: USA gave right to vote to Blacks and women much later. India gave Universal Adult Franchise since independence.

→ Reservation: India allowed for reservation of socially and economically backward classes in politics, jobs and ~~schoo~~ education (art. 14, 15). USA has provided no reservation to disadvantaged communities.

→ LGBTQ Rights: USA allows for same sex marriage while India does not.

→ Abortion Rights: Indian views are more liberal (MTP Act 2021) than USA (Roe v Wade Judgement).

→ Targeted Acts in India: Like Prevention of Atrocities to SCs/STs Act. USA has no such laws for crimes against races.

→ Religion: Positive ~~disc~~ enforcement for equality in India (Opening religious institutions to SCs/STs) unlike USA.

Both India and USA have come a long way in correcting historical injustices against vulnerable communities.

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13. Objections to domicile-based reservation in private sector jobs on the grounds of constitutional equality and freedom are misplaced. Critically discuss. **(250 words) 15**

संवैधानिक समानता और स्वतंत्रता के आधार पर निजी क्षेत्रक की नौकरियों में अधिवास आधारित आरक्षण पर आपत्ति अनुचित है। समालोचनात्मक चर्चा कीजिए।

Recently, Haryana passed a law to reserve 75% of jobs in the private sector for local residents. While the Supreme Court reversed the High Court's stay on the order, certain objections against the law have come to surface.

	Objections to the law	Why are they misplaced?
(1)	Against the Constitution (Freedom of Movement (Article 19))	Article 16 clearly states that the parliament can create laws requiring residence as a requirement for employment. Hence it does not violate the constitution
(2)	Against Right to Equality	Exceptions towards positive discrimination are allowed as

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		per the constitution and Supreme Court judgements
(3)	Will drive companies away from state	The law will affect only limited number of employees (based on salary)

Issues with the law

(1) Whether reservation in private sector is constitutionally allowed or not.
↳ It is upto the judiciary to interpret this

(2) Creates barriers for migrants

(3) ~~to~~ Restrictive for companies since they have to hire from a smaller pool of applicants that may not have the required skillset.

(4) Will render the state uncompetitive in the long run.

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Way Forward

→ Domicile based reservation in private sector must be allowed only for unskilled-semi skilled labours.

↳ This is because of the dearth of skilled workers.

↳ The reservation should not exceed 50%.

→ The reservation should occur only for a limited period in which the state should upskill its own residents and improve competitiveness.

While objections to domicile-based private sector reservations may be misplaced, the aforementioned points must be kept in mind to promote national integration.

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(इस भाग में कुछ ना लिखें)

14. There have been arguments that sedition law is an attack on the very foundation of India's liberal democratic principles, as enshrined in the Constitution. Do you agree? **(250 words) 15**

ऐसा तर्क दिया जाता है कि राजद्रोह कानून भारत के उदार लोकतांत्रिक सिद्धांतों की नींव पर हमला है, जैसा कि संविधान में निहित हैं। क्या आप सहमत हैं?

Sedition, penalized by Article 124 of the Indian Penal Code, is a colonial era law that heavily impinges on India's liberal democratic principles.

What is Sedition?

→ The act of causing hatred or 'disaffection' towards the government through printed, spoken or electronic material.

→ Can lead to imprisonment for life, seizure of passport and bar on government jobs.

Issues with Sedition Law

① Historical Factors

This very law was used to attack free speech in the National Movement and

led to arrests of leaders like BG Tilak and Surendranath Banerjea.

② Ill defined terms: Words like "disaffection" are ill defined and open to interpretations.

③ Excessive Punishment:
- Seizure of Passport is against Article 21 (Right to travel abroad)
- Bar on government jobs and life imprisonment are excessive and not commensurate to the crime.

④ Against Art 19(1): Freedom of speech and Expression, and disallows constructive criticism of the government.

⑤ Misuse: Has been misused time and again by ruling parties to quell dissent eg. Dr. Kafeel Khan, Journalist Siddique Kappan, various comedians, etc.

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Why it is needed

① To prevent genuine hostility towards the government.

② For a new democracy in 1947, it might have been needed to ensure peace.

Way Forward

→ The sedition law is clearly prone to abuse and misuse, and can target civil liberties in the country, endangering its democratic principles.

→ The Supreme Court has rightly kept the law in abeyance until the legislature takes action on it.

The Article 124-A of the IPC must be repealed or sufficient safeguards must be added with reduced quantum of punishment.

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15. Despite Government e-Marketplace facing certain challenges, it has brought about a significant improvement in the procurement of goods and services by various government agencies. Discuss. **(250 words) 15**

गवर्नमेंट ई-मार्केटप्लेस द्वारा कुछ चुनौतियों का सामना करने के बावजूद, इन्होंने विभिन्न सरकारी एजेंसियों द्वारा वस्तुओं और सेवाओं की खरीद में महत्वपूर्ण सुधार किया है। चर्चा कीजिए।

The Government e-Marketplace is an electronic postal through which government departments can procure good and services.

[Improvements brought by GeM]

① Transparency

~~Ind~~ Industries list goods with price
↓
Government can use its cost model to procure good and services
↓
Transparency in price, selection and payment.

② Reduction in costs

Since industries anywhere in India can sell on the postal, this reduces

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overhead costs.

③ Common Procurement and Rating system
Various departments can procure at the same price through vendors based on their rating.

④ Digitized documentation of purchases
Helps in simplified audits, budgeting

⑤ Expeditious procurement due to digitized records, digital auctions, etc.

⑥ Can help in data analysis for listing out different procurement models ~~and~~

[Challenges Faced]

① lack of training and know-how of portal usage

② Regularly appearing glitches and software bugs

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(3) Frivolous companies entering the portal to show increased price

(4) Lack of adoption by states

(5) Difficulty in testing models other than the least cost model, eg- quality based model, etc.

While the GeM portal has revolutionalized public procurement, the aforementioned challenges must be overcome for true transparency in procurement.

anything this margin (इस भाग में कुछ ना लिखें)

16. A reformed system of recruitment, training and evaluation needs to be put in place to take forward the development of a highly efficient and accountable civil service. Discuss in the context of India. **(250 words) 15**

अत्यधिक कुशल और जवाबदेह सिविल सेवा के विकास को आगे बढ़ाने के लिए भर्ती, प्रशिक्षण और मूल्यांकन की एक संशोधित प्रणाली लागू करने की आवश्यकता है। भारत के संदर्भ में चर्चा कीजिए।

While the civil service in India has greatly helped in its developmental story in the past 75 years of independence, it suffers from inefficiencies and red-tapism in decision making.

Reforms in Civil Service

A. RECRUITMENT

① Encouraging lateral entry : The 'Generalized vs Specialized' debate continues to plague the bureaucracy.

→ There should be a mix of generalized officers and specialized lateral entry officers

② Specialized All India Services

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→ Services like All India Medical Service, All India Judicial Service and All India Environment Service should be brought in, with candidates having appropriate academic background.

→ Will require immense cooperation from the states

③ ~~2nd ARC Recommen~~ Hota Committee Recommendations on recruitment, ~~eg~~. should be ~~recom~~ implemented with regards to age limit, number of attempts, etc.

B. TRAINING

① Training in Public Relations and Ethics

→ There is a usual complaint about the bureaucracy being rule-minded and disconnected from the public

→ Training in public interactions, speaking and relations is a must.

② Training in Emerging Technologies

eg. Social media and its threats, AI

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and cryptocurrency, etc.

③ Retraining periodically
↳ For continuous education, eg. every 5 years.

C. EVALUATION

① Code of ~~Conduct~~ Ethics, and not just Code of Conduct Rules (1984) should guide civil servants.

② Performance, and not just seniority-based promotions.

③ Penalization for unlawful / unethical behaviour but discouraging punitive transfers

④ Social audits in districts for periodic evaluation of government officials.

⑤ Career-based evaluation (say every 5 years) with a possibility of dismissal upon inadequate performance.

The 2nd ARC and the Hota Committee Reforms must be brought in to ~~fill~~ fill a well functioning bureaucracy.

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17. Despite initiatives taken by the Indian government to achieve critical goals in the education sector, major interventions are required to tackle learning poverty as well as the persisting inequalities. Discuss. (250 words) 15

शिक्षा के क्षेत्र में महत्वपूर्ण लक्ष्यों को प्राप्त करने के लिए भारत सरकार द्वारा आरंभ की गई पहलों के बावजूद, लर्निंग पॉवर्टी (अधिगम निर्धनता) के साथ-साथ विद्यमान असमानताओं से निपटने के लिए बड़े हस्तक्षेपों की आवश्यकता है। चर्चा कीजिए।

While India has greatly improved its literacy rate to over 75% in recent years, learning poverty and inequalities continue to plague the education sector.

Initiatives by the Government

→ Samagra Siksha Abhiyaan
→ Beti Padhao Beti Bachao
→ Mid-day meal scheme / POSHAN 2.0
→ Schemes like Nai Roshni, Nai Manzil, Naya Savera, ~~etc~~ NIPUN Bharat, etc.
→ Scholarships like Prime Minister Research Fellowship, etc.

Issues with Education in India

A. LEARNING POVERTY

→ Inadequate Skillset: Majority of graduates are unskilled for jobs in the formal sector. This is

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due to:

① Outdated curriculum

② Insufficient lab/ technological equipment in schools

③ Inadequate use of educational technology in schools.

→ Early Childhood care and Education

① Lack of reading / numeracy skills in children (like ASER Report by Pratham highlights this)

② Stunting/Wasting in children affecting educational outcomes.

B. INEQUALITY

→ Digital Divide: ① Around 50% children lack smartphone access.

② Digital literacy is inadequate

③ Exacerbated during COVID-19.

→ Private Education is very expensive in India.

↳ Eg. many students go abroad for medical studies.

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Way Forward

A. Tackling Learning Poverty

① Implementation of NIPUN Bharat, Student-Teacher Assessment Programme in line with NEP-2020.

② Revamping curriculum to teach practical, vocational and emerging technologies

③ Encouraging teaching in mother tongue

④ use of Educational Technology like smart boards, NPTEL, etc.

B. Tackling Inequality

① Digital literacy and awareness

② Supply of learning tablets

③ Encouraging e-learning through portals like DIKSHA, SWAYAM, etc.

The NEP-2020 has been a revolutionary guiding policy towards a skilled India. It should be implemented in letter and spirit.

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(इस भाग में कुछ ना लिखें)

18. In light of the burgeoning burden of both communicable and non-communicable diseases, there is a need to revamp the public health surveillance system in India. Discuss. **(250 words) 15**

संचारी और गैर-संचारी दोनों प्रकार के रोगों के बढ़ते बोझ के आलोक में, भारत में सार्वजनिक स्वास्थ्य निगरानी प्रणाली में सुधार की आवश्यकता है। चर्चा कीजिए।

The COVID-19 pandemic has exposed the inefficiencies ~~of~~ and inadequacies of India's public health surveillance, and it needs to be revamped.

Limitations of the system

→ lack of technological infrastructure

(a) like computers, smartphons, etc. especially in rural areas, which makes record keeping and surveillance difficult.

(b) Digital Divide: Due to only 50% of population owning smartphones, the remaining 50% is out of the surveillance net of Aarogya Setu, COWIN, etc.

(c) Privacy Issues: Apps like Aarogya Setu which store a lot of personal data could

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potentially be misused, especially in the absence of a Data Protection Law.

(d) Lack of digitized health records: Especially the medical history in case of non-communicable diseases like heart disease, hypertension, diabetes, etc; which are though not contagious, but can run in the family.

(e) Low GDP expenditure on health sector, close to 1.3 % only.

Why the need to revamp?

→ communicable ~~diseas~~ diseases

(1) to prepare for COVID-19 like future pandemics
- → contact tracing
- → data analytics

(2) to disseminate information about threats and precautions

(3) to streamline vaccination programmes

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→ Non communicable diseases

① To perform longitudinal (time-based) checks on cancer, diabetes, etc patients

② For digitized records for insurance, medical access, etc.

Way Forward

→ Lessons from COVID-19 : Need to improve digital literacy, effective apps for contact tracing, hospital bed availability, etc.

→ Digital infrastructure : Computers, high-speed internet and smartphones especially in rural areas.

→ Digitization of health records. eg. NDHM

With India's population ~~aging~~ starting to age rapidly from the 2040s, it is high time that we revamp the public health surveillance system.

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(इस भाग में कुछ ना लिखें)

19. The repercussions of the ongoing economic crisis in Sri Lanka extend beyond its borders. Discuss with specific reference to India. Also, mention the steps that India has taken to assist Sri Lanka tide over the crisis.

(250 words) 15

श्रीलंका में जारी आर्थिक संकट का प्रभाव उसकी सीमाओं से परे भी पड़ रहा है। भारत के विशिष्ट संदर्भ में विवेचना कीजिए। साथ ही, उन कदमों का भी उल्लेख कीजिए जो भारत ने इस संकट से निपटने में श्रीलंका की सहायता के लिए उठाए हैं।

The economic crisis in Sri Lanka that started off as a protest and culminated in a virtual revolution has sent warning signals across the globe as to what faulty economics can do.

Repurcussions of ~~to~~ Sri Lanka's crisis beyond borders

→ Economic Front

- Sri lanka had defaulted on its debt and had huge fiscal deficit.
- India and many Indian states suffer from major twin deficit issues, and while India is unlikely to default on debt, the Sri Lankan crisis clearly offers a warning.

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→ Social Front

- Influx of refugees: especially into Southern states like Tamil Nadu
- Social unrest in Sri Lanka can cause spillover effect in Tamil Nadu.

→ Security

- A crisis hit Sri Lanka can become a hub for terrorism and drug trafficking which can cause security issues in India
- Persecution of minorities like Tamils can cause unrest and growth of terrorist outfits in Tamil Nadu.

Positive Impact on India

- Improved relations with Sri Lanka on account of India's assistance
- Kochi Port emerging as alternate for Colombo Port.
- Tourism being diverted to India

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India's Assistance to Sri Lanka

→ $3.8 billion Line of Credit

→ Restructuring of existing loans.

→ Aid in the form of fuel, milk and grain supply.

→ Promised assistance in new policy making

→ Persuading IMF to extend aid to Sri Lanka

→ Accepted Tamil Refugees

→ Cooperation between Tamil Nadu and Sri Lanka

→ Investment in port projects by Indian businessmen.

India has shown to be a reliable partner to Sri Lanka in the times of need, as opposed to China, and this bodes well for Indian diplomacy.

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20. India is a reliable partner in the Indian Ocean Region and can take on the role of being the net security provider in the region. Discuss.

(250 words) 15

भारत हिंद महासागर क्षेत्र में एक विश्वसनीय भागीदार है और इस क्षेत्र में निवल सुरक्षा प्रदाता होने की भूमिका निभा सकता है। विवेचना कीजिए।

The Indian Ocean is considered as 'India's Backyard', and rightly so, because India is a major security powerhouse in the Indian Ocean Region.

Why India is a reliable partner in IOR

→ Transparent, reliable investments unlike China's debt trap diplomacy.

→ Panchsheel Policy of mutual cooperation and non-interference.

→ Security initiatives
- ↳ SAGAR (Security & Growth for All in Region)
- ↳ Indian Ocean Rim Association
- etc.

→ Privy to problems of Small Island Developing States like Climate change, etc.

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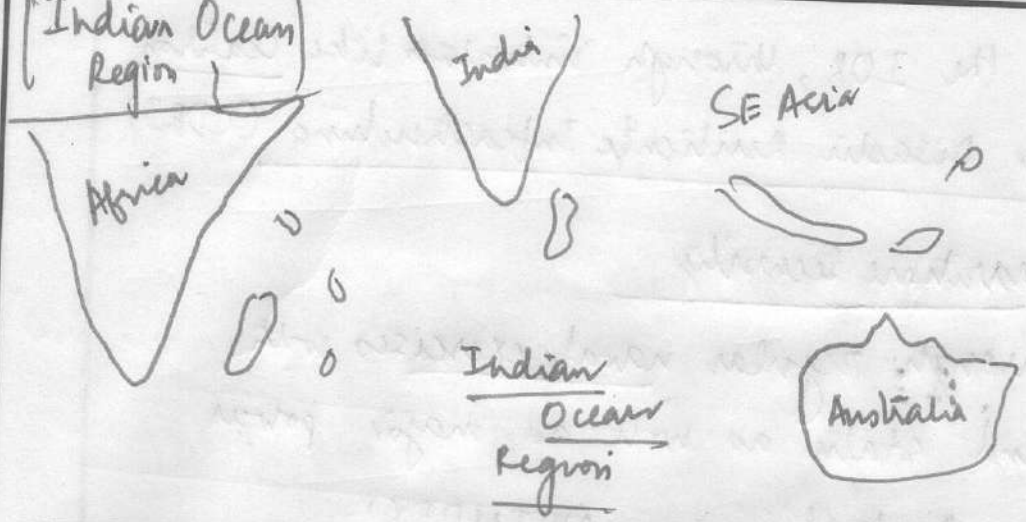
Indian Ocean Region



Security Issues in IOR

① Piracy: Especially in Eastern Africa

② China's 'String of Pearls Policy': Bases in Djibouti, etc.

③ Sensitive trade routes eg. near Strait of Malacca.

④ Resource rich region

How India can take a role of net security provider in the region

① Climate security

India can help in adaptation/mitigation measures of Small Island Developing States

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in the IOR, through initiatives like Coalition for Disaster Resilient Infrastructure (CDRI)

② Maritime Security

ⓐ Through regular naval exercises with Island states as well as major powers like Australia (eg. AUSINDEX)

ⓑ Use ~~naval~~ naval resources to eradicate piracy issue in the region -

ⓒ Discourage Chinese intrusion and deft trap diplomacy ultimately helping Indian interests.

③ Economic security

ⓐ Alternative to china through soft loans that are reliable and transparent

ⓑ Help towards food security eg. Sri Lankan

India continues to remain the most important player in the IOR and must enhance security provisions to other states on all fronts.

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GENERAL STUDIES (TEST CODE : 1840)

Name of Candidate	POURUSH SOOD		
Medium Eng./Hindi	ENGLISH	Registration Number	1175138
Center	ONLINE	Date	02.09.2022

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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1. While fixed-term employment offers an ingenious way to address specific issues faced by both employers and employees, there are also some concerns associated with it. Discuss in the context of India.

(150 words) 10

हालांकि, नियत अवधि का रोजगार (फिक्स्ड टर्म एम्प्लॉयमेंट) नियोक्ताओं और कर्मचारियों दोनों के द्वारा सामना किए जाने वाले विशिष्ट मुद्दों को हल करने का एक सरल तरीका प्रदान करता है, लेकिन इसके साथ कुछ चिंताएं भी जुड़ी हुई हैं। भारत के संदर्भ में चर्चा कीजिए।

Fixed term or contractual employment refers to the type of employment where a position and its benefits are offered only for a fixed period, at the end of which the employee is automatically laid off.

How fixed-term employment addresses specific issues

→ Reduces Employer expenditure
- ↳ No long term social security payments needed
- ↳ Eg. in Indian Government's contractual jobs, pensions, etc. are not included → fiscal prudence.

→ Encourages dynamic job market
- ↳ linked to demand: more contractual

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workers are hired during peak demand phases.

→ Encourages gig economy: like cab drivers, food delivery, etc.

[Concerns with Fixed Term Employment]

① Reduced job security: Dilutes labour rights, encourages 'hire and fire' culture, especially in India, which has a large youth pool.

② Sidelines social security: Pensions, life insurance, etc. are usually not included. Worrisome for India which already has a low social security penetration.

③ Non-inclusion: Once contract ends, women and vulnerable find it more difficult to reenter the job market.

Strict regulations and social security are a must to ensure employer as well as employee are benefitted from contractual jobs.

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2. An efficient logistics sector with a focus on warehousing is pivotal to the success of the Bharatmala Pariyojana. Discuss. **(150 words) 10**
वेयरहाउसिंग पर केंद्रित एक कुशल लॉजिस्टिक्स क्षेत्रक भारतमाला परियोजना की सफलता के लिए महत्वपूर्ण है। विवेचना कीजिए।

The Bharatmala Pariyojana aims to strengthen the transportation network of the country through greenfield highways and expressways.

Factors determining Bharatmala Pariyojana's success

① Efficient logistics sector
- → Port infrastructure: where we lack
  - → Customs delays (7 2 days) compared to <1 day in the USA
  - → Inadequate development of dry ports
- → Railways: can help decongest road sector
  - → Reducing cross subsidization
  - → Dedicated freight corridors.

How it helps: ① Creation of Multimodal

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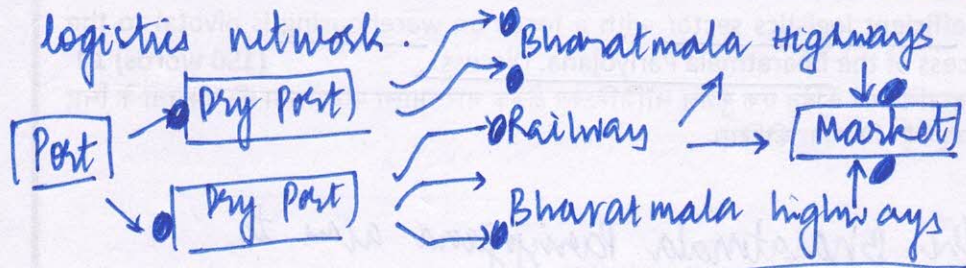
logistics network.

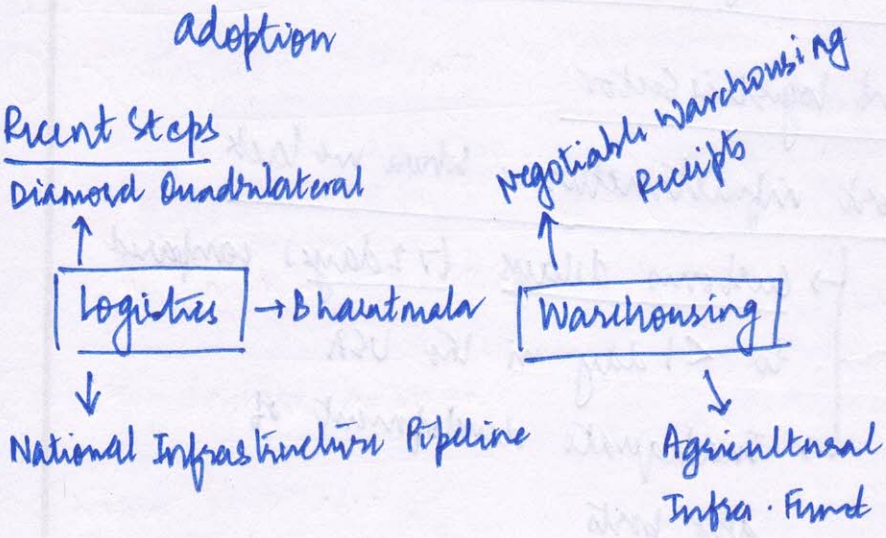


② Focus on Warehousing

● : warehousing points

- → can help in export-import of perishable goods
- → Makes multimodal transportation more effective → hence improving Bharatmala adoption

Recent Steps



A cooperative, multi sectoral approach between the infrastructure and logistics sector can ensure the success of Bharatmala Pariyojana.

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3. What do you understand by the term 'irrigation scheduling'? Bringing out the advantages provided by it, discuss the difficulties faced in applying it on a farm level. **(150 words) 10**

'सिंचाई निर्धारण (इरिगेशन शेड्यूलिंग)' पद से आप क्या समझते हैं? इसके द्वारा उपलब्ध कराये गए लाभों का वर्णन करते हुए, इसे खेत स्तर पर लागू करने के समक्ष आने वाली कठिनाइयों की विवेचना कीजिए।

Irrigation scheduling, as proposed by Punjab Govt. recently, refers to a temporal distribution of irrigation flow, region wise, to impose less stress on groundwater resources.

groundwater not used all at once, replenished by rains

Irrigation Scheduling

Staggered use of irrigation facility

Affects crop yield and harvest in different areas.

Advantages

① Reduces stress on groundwater resources (~50% districts of India are stressed)

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② Reduces fiscal stress on states : Since staggered irrigation means that not all resources are used at the same time.

③ Improves market price: Since it brings slight delay in different regional harvests.

Difficulties

① Diversified cropping pattern : Multiple crops grown hence different irrigation requirements for each crops

② Low farmer awareness: leading to anger against policy.

③ Implementation difficulty: Needs reworking in water distribution system.

If implemented with due planning, irrigation scheduling helps preserve ground water resources.

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4. While the Pradhan Mantri Fasal Bima Yojana was touted as the largest crop insurance scheme globally in terms of farmer participation, various concerns have arisen since its implementation. Discuss. **(150 words) 10**

यद्यपि, प्रधान मंत्री फसल बीमा योजना को किसानों की भागीदारी के संदर्भ में वैश्विक स्तर पर सबसे बड़ी फसल बीमा योजना बताया गया था, तथापि इसके कार्यान्वयन के बाद कई चिंताएं उत्पन्न हुई हैं। चर्चा कीजिए।

The PM-Fasal Bima Yojana is a crop-insurance scheme that aims to hedge farmers against risks of inclement weather, diseases, etc responsible for crop failure.

Early laurels of PMFBY

1. Wide coverage: All-India
   ↳ Prerequisite for farmer loans (now discontinued)
2. Scientific approach: Different premiums for kharif / rabi crops and irrigated / non irrigated crops.
3. Wide risk-mitigation: covering various weather related, and disease related causes for crop failure.

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Concerns in implementation

① Cooperative Federalism missing
- ↳ centrally sponsored scheme, hence state contribution needed
- ↳ Recently, centre drastically cut its contribution : affecting state finances

② Malpractices by insurance companies
- ↳ Rejecting insurance claims
- ↳ Inordinate delays

③ Delays in paying premium component by centre and states

④ Lack of awareness : Especially after it has been made optional : many farmers have dropped out of the scheme.

While the centre has taken many steps like disaster-specific plans (to reduce premium) in PMFBY, streamlining and enhancing the claim disbursal process is the need of the hour.

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5. The Stockholm Conference commenced the contemporary "environmental era", which brought a paradigm shift in the environmental governance and set a tone for multi-lateral environmental regime. Discuss. **(150 words) 10**

स्टॉकहोम कॉन्फ्रेंस ने समकालीन "पर्यावरण युग" की शुरुआत की, जो पर्यावरणीय गवर्नेंस में एक आदर्श बदलाव लाया और उसने बहु-आयामी पर्यावरणीय व्यवस्था के लिए एक दिशा प्रदान की। विवेचना कीजिए।

The Stockholm Conference, i.e., the UN Conference on Human Environment, 1972, paved the way to an 'environmental era' and sowed the seeds of the UN Environment Programme (UNEP).

Stockholm Conference - A disruptive event

① Accountability introduced

- countries for the first time acknowledged their role in environmental pollution
- The role of developed countries in pollution was highlighted: first step towards "Common but Differentiated Responsibilities"

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② Discussed links of development with pollution

- It was in this conference that PM Indira Gandhi asserted that "Poverty is the biggest polluter"
- Hence the role of the 'First world' in environmental finance and technology transfer was highlighted.

③ UNEP: The conference laid the foundation of UNEP and UN Environment Assembly.

Our then Prime Minister Smt. Indira Gandhi, one of the few keynote speakers of the conference, stressed the need for a global fight against pollution and upheld the Indian ethos of sustainable development.

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6. The world has witnessed a huge surge in climate-induced disasters, which are largely driven by anthropogenic factors. In this context, analyse the role of early warning systems in mitigating the impact of the disasters.
(150 words) 10

विश्व में जलवायु-प्रेरित आपदाओं में अत्यधिक वृद्धि हुई है, जो बड़े पैमाने पर मानवजनित कारकों से प्रेरित हैं। इस संदर्भ में, आपदाओं के प्रभाव के शमन में पूर्व चेतावनी प्रणालियों की भूमिका का विश्लेषण कीजिए।

Climate change, which is projected to increase average temperature by over 2°C by 2100, has caused a surge in climate-induced disasters.

Some Recent Climate Induced Disasters
- Pakistan: 2022 Floods
- Heat waves: North India (2022), Europe (2022)
- Increased cyclone frequency: India (Amphan, Fani, etc.)
- Bushfires (California 2021, Australia 2020)

Anthropogenic Factors
- Fossil fuel usage
- Ocean acidification
- Deforestation
- Pollution: air, water, plastic, e-waste
- Use of HFCs, CFCs, etc.

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Importance of Early Warning Systems

- Quicker Evacuation : Floods, Forest Fires, etc.
  - Reduces damage to life
  - Makes rescue operations easier since there will be less people needing help
- Increased Preparedness
  - Stocking up on essential supplies
  - Taking crop enhancement measures (eg. before heat waves)
  - Improved readiness of rescue operations.
- Examples
  - Doppler Radars (cyclones, floods)
  - Weather monitoring systems (heat waves)

India is facing the brunt of climate induced disasters (floods, Assam 2022, cyclone Amphan) etc. We must improve our early warning systems through technology adoption by IMD, Central Water Commission, etc.

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7. Critically examine the implications of leveraging technology in policing. (150 words) 10

पुलिस व्यवस्था (पुलिसिंग) में प्रौद्योगिकी का लाभ उठाने के निहितार्थों का समालोचनात्मक परीक्षण कीजिए।

Modernising of policing system through technological reforms has been one of the prioritized agendas of the Indian criminal justice system.

Examples (BENEFITS)

- Data Analysis
  - National judicial data grid
  - Criminal network databases
- Accountability
  - CCTVs in Police Stations
  - Recording of witness statements
  - Body cams on police
- Aiding Investigation
  - Facial Recognition
  - Biometric Authentication
  - Brain Fingerprinting
  - DNA testing
- Aiding judiciary
  - Information retrieval
  - Authentication of evidences
  - e-Court hearings
  - online arbitration

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Challenges

① Absence of data protection law
- Facial recognition can be used as state surveillance tool
- Brain fingerprinting, etc. violation of privacy (KS Puttuswamy judgement)

② Security concerns
- Systems prone to hacking
- Intelligence leakage

③ Bias
- Eg. AI systems are generally biased against people of colour, women, etc.

④ Lack of training and digital divide.

⑤ Poor technological infrastructure in police stations.

While bringing in ~~policing~~ policing reforms, the privacy issues and digital divide must be addressed.

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8. How far do you agree with the view that climate change poses a threat to international peace and security? **(150 words) 10**

आप इस विचार से कहाँ तक सहमत हैं कि जलवायु परिवर्तन अंतर्राष्ट्रीय शांति और सुरक्षा के लिए खतरा है?

Climate change has the potential of causing catastrophic disasters, and displacing a huge number of people, threatening international peace and security.

Climate Impact and Threats to peace and security

Impact	Threat
① Rising sea levels: inundation of coastal areas, submergence of islands	• Increased migration. • Threat to sovereignty of small-island developing states • Refugee crisis from low lying countries like Bangladesh

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② Increased disaster severity and frequency	large scale displacements disproportionately affecting developing countries → migrant crises
③ Economic security threatened	→ Unilateral carbon Taxes threatening rule based world order → Increased expenditure by countries for climate rehabilitation
④ Threat to water and food security	→ It is believed that the world may soon face 'water wars'

The UNSC recently debated on the inclusion of climate change on its agenda, given its threat to international peace and security.

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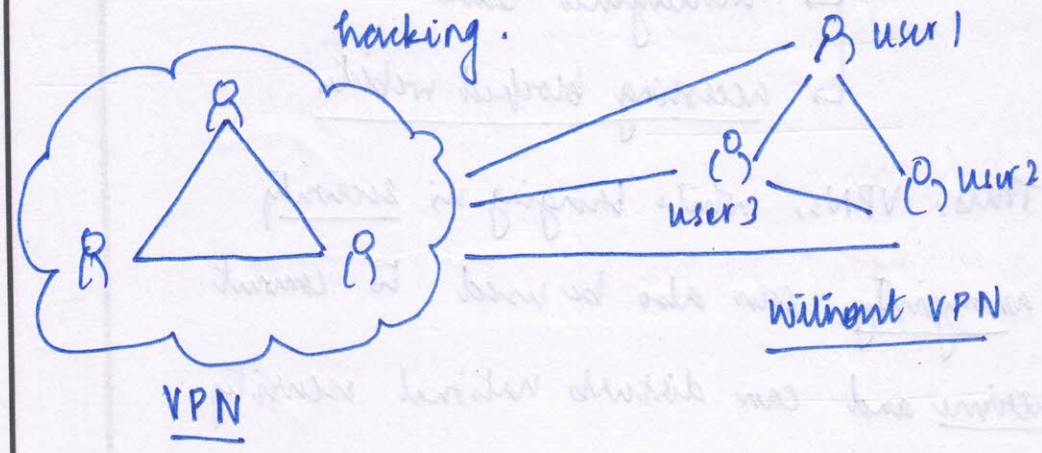
9. What do you understand by a virtual private network (VPN)? Highlight its advantages and discuss the concerns posed by it. **(150 words) 10**

वर्चुअल प्राइवेट नेटवर्क (VPN) से आप क्या समझते हैं? इसके लाभों पर प्रकाश डालिए और इससे उत्पन्न चिंताओं पर चर्चा कीजिए।

A Virtual Private Network is a system of internet networking wherein the IP address of a user is masked and virtually diverted through another location.

Advantages of VPN

① Increased cyber security
- → IP address cannot be intercepted
- → used by companies and groups to protect data and prevent hacking.



② Anonymity : Difficult to track credentials

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and location. Used in countries like China that have huge state surveillance systems.

Concerns with VPN

① Dark Web Accessibility: Usually done through use of VPN → drug trade
→ child abuse
→ information leaks

② Cybercrime: Difficult to identify hackers, pedalers, abusers, etc.

③ Threat to national security:
- → undetectable cyber espionage
- → ransomware
- → intelligence leaks
- → accessing blocked websites

Thus, VPNs, while bringing in security and anonymity can also be used to commit cybercrime and can disturb national security.

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10. The discovery of the Higgs Boson at the Large Hadron Collider in CERN completed 10 years recently. In this context, discuss the role played by CERN in overall scientific development. **(150 words) 10**

सर्न (CERN) स्थित लार्ज हैड्रॉन कोलाइडर में हिग्स बोसोन की खोज को हाल ही में 10 वर्ष पूरे हो गए हैं। इस संदर्भ में, समग्र वैज्ञानिक विकास में सर्न द्वारा निभाई गई भूमिका पर चर्चा कीजिए।

The Higgs Boson, or the 'God Particle' that created the universe, was discovered in CERN, a European organization encompassing Particle Physics and Astronomy.

The Role of CERN

- large Hadron Collider
  - largest Particle Accelerator in the world.
  - Multi-state participation in research experiments
  - Greatly advances our study of the Standard Model of Physics and beyond: study of muons, bosons, quarks, etc.

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↳ Energy Sources: Studies related to Nuclear Fusion for cleaner energy resources.

India and CERN

↳ Participation in Particle Accelerator Projects: upcoming research facility in maharashtra.

↳ Collaborative research with premier institutions like IISc Bangalore, IIT Bombay.

↳ Research exchange through CERN-India internship programme

CERN is arguably the most important research lab in the field of particle physics.

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11. Highlighting the factors that affect the cropping pattern in India, discuss the need for modifying it in the context of the emerging agro-ecological concerns. **(250 words) 15**

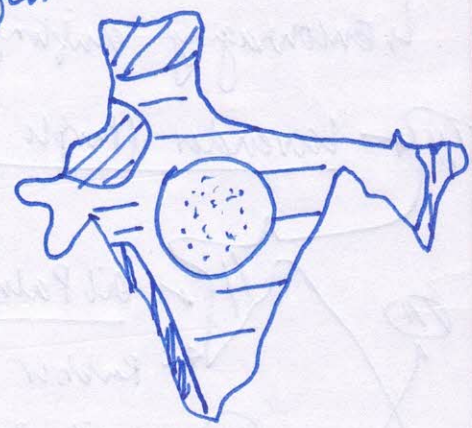
भारत में फसल पद्धति को प्रभावित करने वाले कारकों पर प्रकाश डालते हुए, उभरती कृषि-पारिस्थितिकी चिंताओं के संदर्भ में इसे संशोधित करने की आवश्यकता पर चर्चा कीजिए।

India, that has historically been an agro-based economy, and still constitutes the largest sector by employment.

Factors affecting cropping Patterns

① Rainfall: Over 1/3rd of Indian agriculture is irrigated; rest is rainfed

↳ Hence monsoonal rainfall greatly impacts the cropping pattern



⇓

bajra ← : <50cm

millets like ragi, jowar, pulses ← : <100 cm

rubber, coffee, tea ← : >200 cm

rice, wheat, sugarcane ← : ~~200~~ 100-200 cm

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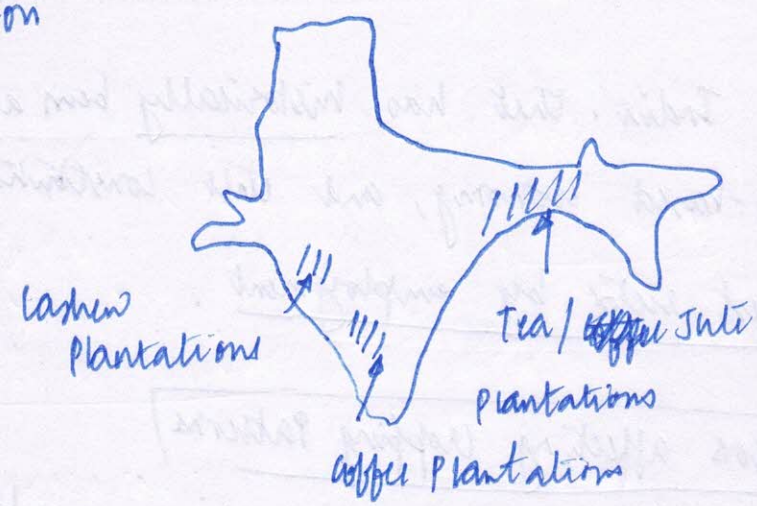
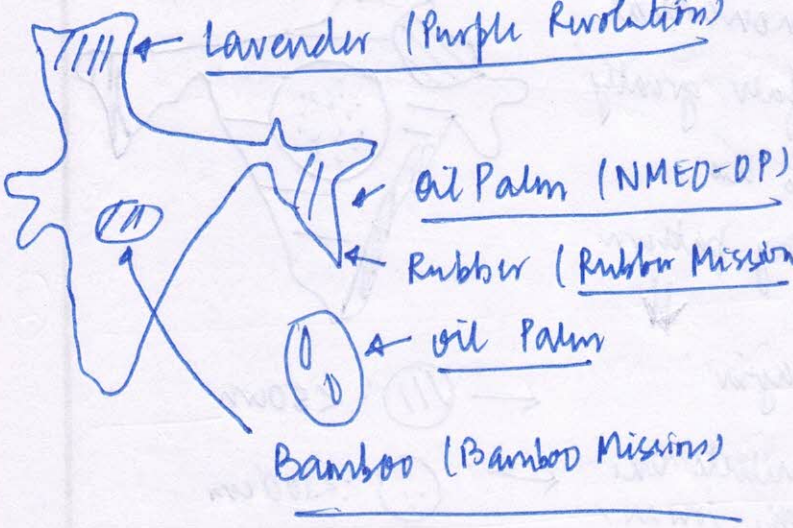
② Historical Factors

↳ Plantations introduced by British: dual region



③ Government Policy

↳ Encouraging shifting cropping patterns:



④ Irrigation: Eg. certain areas of West Rajasthan have been brought under cultivation

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due to Indira Gandhi Canal.

(5) Soil type: Cotton (Black soil), Sugarcane (Alluvial soil), etc.

(6) Green Revolution: Wheat/Rice in Punjab/Haryana/Western UP.

(7) Topography: Tea/Jute in hilly areas.

Modifying it

Why?
- global warming
- changing monsoon patterns
- soil sustainability

How?
- Diversification through MSP, government incentives, etc.
- Discouraging water intensive crops like rice in stressed areas like punjab
- Encouraging multiple cropping, horticulture by bringing spices, fruits, vegetables under MSP.

With more than 50% population dependent on agriculture, a change in cropping patterns is necessary for sustainable agriculture.

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12. While the budgetary reforms undertaken by the Central government in recent years have led to better management of government expenditure, there are some issues that still need redressal. Discuss. **(250 words) 15**

जहाँ हाल के वर्षों में, केंद्र सरकार द्वारा किए गए बजटीय सुधारों के कारण सरकारी व्यय का बेहतर प्रबंधन संभव हुआ है, वहीं कुछ ऐसे भी मुद्दे विद्यमान हैं जिनका समाधान किया जाना अभी बाकी है। विवेचना कीजिए।

The central government has taken various budgetary reforms in the past decade to ensure fiscal prudence and proper budget management:

① Outcome-Based Budgeting : For newly introduced schemes for better evaluation of results; and accordingly ~~to~~ use release of funds for next year.

② Consolidation of Rail Budget into General Budget : Better coordination of Railways, Ports and Transportation ministries ~~of~~ for infrastructural development schemes eg. National Infrastructure Pipeline.

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③ Reducing Revenue Expenditure : Through New Pension Scheme, austerity measures relating to foreign trips, etc.

④ Adoption of technology: Through Public Financial Management System (PFMS), IndEA 2.0 stack, Government-e-Marketplace, etc.

⑤ Procurement Models : Use of Quality-based models rather than Lowest cost (L1) model for procurement.

⑥ New Investment Models introduced : BOT for roads, PPP in airport are increasingly given a push.

⑦ Increased capital expenditure : ~30% GFCF Fixed Capital Formation - GDP ratio.

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Issues needing redressal

- Reduction of cesses / surcharges by centre
- Reduction in Non lapsable Funds like MPLADS, Nirbhaya fund, etc
- Reduction in extra budgetary borrowings (FCI procurement), etc
- Reduced misuse of money bills (eg. Adhaar Bill)
- Increasing lim all time low productivity of parliament.

Recent budgetary reforms are laudable, but aforementioned issues need redressal.

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(इस भाग में कुछ ना लिखें)

13. For India to create a 'future ready' railway system, it must harness innovation and resource efficiency. Discuss the statement in the context of the measures enlisted in the National Rail Plan 2030. **(250 words) 15**

भारत को 'फ्यूचर रेडी' रेलवे प्रणाली के सृजन हेतु, नवाचार और संसाधन दक्षता का उपयोग करना चाहिए। राष्ट्रीय रेल योजना 2030 में सूचीबद्ध उपायों के संदर्भ में इस कथन की विवेचना कीजिए।

The National Rail Plan, 2030, aims to prepare the Indian Railways for the future - through technology, profits and modernization.

'Future Ready' Indian Railways

→ Improve Resource Efficiency:

- → Issues
  - → Poor operating Ratio (~99).
  - → >60% expenditure goes to salaries, pensions
  - → Little capital expenditure
- → Measures in accordance with National Rail Plan
  - → Improving operating Ratio through
    - → Reduced cross subsidization
    - → Fixed term employments

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- Outsourcing to private players: services like cleaning, ticketing, etc.
- Improved Capital Expenditure
  - Improving services: catering, tourism, etc.
  - Finding new sources of expenditure
    - Railway bonds
    - Private participation in consultancy, finance
      - Privatization of railway
        - Allowing private sector to use rail infrastructure
        - Eg. IRCTC
      - PPP projects
        - New routes, freight corridors.
- Incubating Innovation
  - Technology adoption
    - security systems (eg. KAVACH

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

anti collision avoidance systems, fog removal from videos, etc.)

↳ Booking systems : Crowd prediction, surge pricing, etc.

↳ Innovative Investment Models in Railways like PPP, BOT, etc. to be encouraged.

↳ Station modernization, adoption & innovation in catering (eg. use of Whatsapp for food delivery in trains (2022)), etc.

The Railway Plan 2030 is a far sighted document that can propel railways into modernity and profitability.

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(इस भाग में कुछ ना लिखें)

14. Discuss the significance of technology in the Indian agricultural sector. Also, state the challenges in realising its potential to improve agricultural efficiency and increase the income of the farmers. **(250 words) 15**

भारतीय कृषि क्षेत्रक में प्रौद्योगिकी के महत्व पर चर्चा कीजिए। साथ ही, कृषि दक्षता में सुधार और किसानों की आय बढ़ाने की इसकी क्षमता का उपयोग करने में आने वाली चुनौतियों का भी उल्लेख कीजिए।

Technology has improved Indian agriculture since time immemorial: from the use of iron ploughshare in the Later Vedic Times to the Green Revolution of the 1970s.

Significance of technology in agriculture

① Improving efficiency and reducing resource usage

- Better irrigation systems → drip, sprinkler
  - ↳ Reduce water requirement (~30% of India's districts are groundwater scarce)
- Better fertilizer efficiency
  - eg. Nano urea liquid introduced by IFFCO.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

② Improved crop Yield

↳ use of GM crop like GM tomato in USA: much higher yield.

③ Reduced crop risks

↳ Use of Bt-cotton in India : Resistance from bollworm pest

↳ Early warning systems of droughts, rainfall, etc: farmers make better decisions.

④ Empowering the farmer

↳ Improving decision making

↳ Soil Health card, Yield Prediction, etc.

↳ Kisan Vigyan Kendras, Kisan call centres

↳ Increasing income

↳ cold storage facilities

↳ improved yield

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Challenges in technology adoption

- Digital Divide → 50% Indians own smartphones, mostly in urban areas.
- Digital illiteracy → 74% women have only used internet. With feminization of agriculture, this hinders technology adoption (NFHS-5)
- Poor Extension service: last mile delivery of technology is poor in Eastern states
- Not farmer friendly
  - Apps not available in local language
  - Farmer unaware of benefits of technology adoption.
- cynicism: Against adoption of 'foreign' technology.

Last-mile delivery of technological services to farmers will aid in doubling their income

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. Despite the digital transformation in the Public Distribution System (PDS) in India, several challenges still remain. Elaborate. Also, suggest measures to address them. **(250 words) 15**

भारत में सार्वजनिक वितरण प्रणाली (PDS) में डिजिटल रूपांतरण के बावजूद, अभी भी अनेक चुनौतियां विद्यमान हैं। सविस्तार वर्णन कीजिए। साथ ही, इनके समाधान हेतु उपायों का सुझाव दीजिए।

India has taken various steps to modernize the PDS system; however plenty of challenges still remain.

Digital Transformation of PDS

- Adhaar-based authentication and Adhaar Enabled Payment system (AEPS)
  - Use of Jan Adhaar Mobile (JAM) trinity to
    - Reduce leakage of subsidy
    - Reduce corruption in PDS systems.
- Portals, eg. Annavitran Portal
  - For better scheme monitoring and data analysis of PDS schemes.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ Use of Integrated Management of PDS system (IM-PDS): For better coordination with states, better transparency in beneficiaries, etc.

→ Fund Release: Use of Public Financial Management System (PFMS) for fund release to states.

→ Empowering FCI: ~~For~~ By improving cold chain, warehousing technologies

→ Potential of eRUPI: To reduce subsidy leakage and inclusion/exclusion issues.

Challenges
→ Digital divide
→ Financial exclusion of vulnerable household
→ lack of grievance redressal mechanisms

Don't write anything this margin (इस भाग में कुछ ना लिखें)

↳ Cooperative Federalism absent : Not all states on board

Way Forward

↳ Ensure both technological as well as conventional ways available : to reduce digital exclusion. eg. conventional authentication should be available alongside AEPS

↳ Bridge digital divide : Through extension services, Kisan Credit Cards, universal inclusion of PMJDY (Jan Dhan Yojana), etc.

↳ eRUPI : implementation in PDS on war footing

↳ Grievance Redressal officer in every Tehsil.

Technology has proved to be a boon for PDS in reducing leakage and corruption, however, the aforementioned steps can strengthen it further.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. Discuss the various concerns that exist with regard to fuel efficiency regulations for vehicles in India. Also, suggest the measures that can be taken in this regard. **(250 words) 15**

भारत में वाहनों के लिए ईंधन दक्षता विनियमों के संबंध में विद्यमान विभिन्न चिंताओं पर चर्चा कीजिए। साथ ही, इस संदर्भ में किए जा सकने वाले उपायों का भी सुझाव दीजिए।

Fuel and Corporate Efficiency for Vehicles norms are a positive step towards pollution abatement in India. However, they suffer from certain limitations.

Fuel Efficiency Norms in India

① Fuel Efficiency: Amount of distance travelled for a litre of petrol/fuel burned by a vehicle.

↳ Corporate Based Norms: In India, an automobile company needs to have an average fuel efficiency across all its models: meaning that some can be less fuel efficient; some can be more

Don't write anything this margin (इस भाग में कुछ ना लिखें)

↳ These norms differ for petrol, diesel, commercial, vehicles

↳ They also differ among two / three / four wheelers.

② Norms for personal vehicles once in possession

↳ Pollution check: needs to be done regularly and pollution certificate needs to be procured.

③ Fuel Blending Norms : >E10 vehicles allowed for manufacturing only. Goal is to switch to E20 by 2025.

④ BS-IV and BS-VI norms : Direct transition to BS-VI to BS IV.

Concerns and Measures

① Strict BS-VI norms slowing down the automobile sector

↳ Direct transition to BSVI from BSIV has increased cost of vehicles.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Measures: Staggered transition to BS VI : validity of BS IV vehicles for 10-15 more years, subsidies, tax incentives on BS VI vehicles to reduce consumers cost

② Corporate Average Fuel Efficiency norms have loopholes and can be misused : Since 'average' efficiency leads to some models being highly fuel inefficient.

Measures: Model specific norms - cap on ~~maximum~~ minimum efficiency, dynamic norms based on units sold.

③ Fuel Blending : Additional cost incurred on manufacturers, ultimately on consumers, to make cars E20 compliant.

While the fuel efficiency norms are laudable, concerns of the automobile industry must not be sidestepped.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Urban fire is becoming a serious cause of concern in Indian cities. In this context, highlight the major causes behind urban fires in India. What steps can be taken to build robust fire resilience in Indian cities? **(250 words) 15**

शहरी आग (अर्बन फायर) भारतीय शहरों में चिंता का एक गंभीर कारण बनती जा रही है। इस संदर्भ में, भारत में शहरी आग के प्रमुख कारणों पर प्रकाश डालिए। भारतीय शहरों में मजबूत अग्नि रोधी क्षमता के निर्माण हेतु क्या कदम उठाए जा सकते हैं?

The recent fire in Delhi's Mundaka which led to the loss of over 30 lives point a strong policy towards combating urban fires in India.

Causes behind urban fires

① lax implementation of building codes
- → faulty electricity wiring : short circuits
- → use of flammable insulation, especially in sound proof locations like theatres (Uphaar Cinema Tragedy)
- → use of inflammable tarps, etc in commercial establishments.

② Inadequate safety measures : lead to quick spreading of fire :

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ Close, cramped buildings → lead to fast fire spread especially in market areas.

→ unavailability of fire extinguishers, sand buckets, etc.

→ unavailability of emergency exits.

③ lax Response

→ Delayed firefighting response

→ Resource crunched fire department

④ Urban Heat Island Effect

→ Heat waves leading to more fires

eg. Ghazipur landfill fire during 2022 Heat Wave.

Recent Examples

→ Hyderabad coaching centre fire (2018)

→ Kolkata New Market Fire (2021)

→ Delhi Ghazipur landfill Fire (2021)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Measures Needed

→ Strict implementation of building bye-laws
- → Through stringent NOC, licensing issuance
- → Regular inspections on buildings
- → Strict action on unauthorized buildings

→ Training and awareness
- → Allowing citizens to report buildings with lax fire safety measures
- → Basic fire safety training in school
- → Women's participation (eg. Delhi Fire Service training female firefighters)

→ Modernisation of unauthorized colonies and markets.

→ Landfill reclamation.

With climate change, the urban fires have become a grave threat demanding immediate attention.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

18. Drones in border areas present a serious threat for border management in India. Elaborate. Also, discuss the different measures taken to regulate the use of drones in India. **(250 words) 15**

सीमावर्ती क्षेत्रों में ड्रोन, भारत में सीमा प्रबंधन के समक्ष एक गंभीर खतरा उत्पन्न करते हैं। सविस्तार वर्णन कीजिए। साथ ही, भारत में ड्रोन के उपयोग को विनियमित करने के लिए किए गए विभिन्न उपायों पर चर्चा कीजिए।

Drones, with their unmanned nature, swiftness and interception difficulty, are increasingly being weaponised on our borders.

The threat of drones on border areas

① Attacks
- Missiles / bombs can be placed on drones and dropped at the target
- Potential misuse for chemical / biological weapons as well.

② Intelligence leakage
- Drones can use mics / camera to intercept security discussions on border
- can be placed in discreet locations for continuous information leakage.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

③ Fueling terrorism

- can be used to safely deliver messages to insurgents across the border.
- can supply arms to/drugs across border.

④ Mapping

- can be used to construct maps of posts and border areas through ~~tape~~ camera
- can be used to strategize and chart out an attack.

⑤ Interception difficult
- small size
- can use spoofing techniques
- stealth drones

⑥ Unmanned Nature

↳ Becomes a safer option to cause security issues across border.

⑦ Versatility: Drones can be fitted with camera, arms, IR Radars, etc.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Measures taken by India

① Drone Rules → Licensing requirements for drone flying
→ Red / Yellow Green zones
↑ Restricted drone flying
(Border Areas, Airports, etc)

② Indigenous Drone Development
→ By DRDO, etc. for defence purposes
→ Import restriction on drones.

③ Drone interception technology
→ GPS Spoofing
→ Net / Harpoon Capture
→ Fighter drones
Being introduced in Border Areas

④ Network Jamming : To prevent drone communication in border areas.

With the increasing usage of drones by Pakistan on our Northern Border, it is imperative that we improve drone interception and destroying capabilities

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. Despite a global framework to prevent weaponization of space, it has been increasing in the recent times. Discuss. Also, give an account of the implications of space weaponization. **(250 words) 15**

अंतरिक्ष के शस्त्रीकरण को रोकने के लिए एक वैश्विक ढांचा होने के बावजूद, हाल के दिनों में इसमें वृद्धि हुई है। चर्चा कीजिए। साथ ही, अंतरिक्ष के शस्त्रीकरण के निहितार्थों का विवरण दीजिए।

The 'space race' is said to have introduced the next frontier of war : 'the space'.

Global Framework against weaponisation of space

→ Artemis Accords
- → Peaceful uses of space
- → led by NASA
- → India and China are not members
- → Details
  - → space debris issue
  - → joint ownership of space resource
  - → ban on space weaponisation

Space weaponisation : use of space to vitiate international peace and security.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Why its increasing

- Advancements in space sector
  - cost reduction
  - technical progress
    - miniaturization satellites (eg. Starlink)
    - use of transfer orbits
- No global framework
  - India/China not a part of Artemis Accords

Forms of weaponization : Wars of the future

- Space Debris being navigated to hit satellites
- Satellite-satellite clashes
- Satellites falling onto civilian areas (several near misses with India recently)
- Seizing control over communication/radar satellites

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Implications of space weaponization

- Expensive warfare: Sending satellites is a huge expense. Mutual destruction would lead to huge economic loss.
- Kessler Effect: Space is getting strewn with debris, hence causing unsafe space travel
- Hampers human spaceflight and research in astronomy: since focus is more on space defense
- Human cost in long run: space based warfare can wreak havoc on ground → loss of life.

We must settle on a common global framework to prevent space from becoming a new frontier of war.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. What do you understand by a bio-economy? Highlight the role that the National Biotechnology Development Strategy 2021-2025 can play in creating a robust bio-economy in India. **(250 words) 15**

बायो-इकोनॉमी (जैव-अर्थव्यवस्था) से आप क्या समझते हैं? भारत में एक मजबूत बायो-इकोनॉमी के सृजन में राष्ट्रीय जैव प्रौद्योगिकी विकास रणनीति 2021-2025 द्वारा निभाई जा सकने वाली भूमिका पर प्रकाश डालिए।

Bioeconomy refers to the use of biotechnology to aid different industries, eg. agriculture, transportation, etc.

Bio-economy

- Biofuels: Eg. ethanol, methanol etc. generated from bio-sources like sugar beets, sugarcane, maize, etc.
- Use in health sector
  - Eg. Nature based medicine, biodegradeable nanobots, etc.
- Pollution Reduction
  - Eg. Plastic eating bacteria, oil spills cleanup
  - Bioremediation

Don't write anything this margin (इस भाग में कुछ ना लिखें)

↳ sewage treatment

→ Biogas: For sustainable, clean fuel source.

→ Crop production: Biofertilizers, crop research, GM crops, etc.

→ Traditional Medicine and Bio-Medicine

↳ Research on medicinal herbs

↳ Nature-based remedies eg. ~~turmeric~~ turmeric

Role of NBDS 2021-25

① Multidimensional coverage

↳ covers various sectors

↓ health ↓ transportation ↓ Environment, etc.

② Emerging technologies

↳ eg. bioraccines, biomimicry, nanotechnology etc. included

in synergy with biotech. policy.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

③ Inclusive Policy

- Participation of women in STEM
- Use of traditional knowledge (tribal)

④ Energy transition

- Biomass as a fuel (clean fuel)
- Biogas economy: cooking fuel, useful in island areas like Andaman and Nicobar Islands as energy source.

Thus, the NBDS 21-25 can create a robust bio-economy for India and is already showing results (eg. Generation 2,3 ethanol production).

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GENERAL STUDIES (TEST CODE : 2213)

Name of Candidate	POURUSH SOOD	Registration Number	1175138
Medium Eng./Hindi	ENGLISH	Date	23 July '22
Center	ONLINE		

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
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15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. An effective approach to green budgeting is underpinned by strong strategic framework, tools for evidence generation and an enabling budgetary governance framework. Discuss. (150 words) 10

हरित बजट के लिए एक प्रभावी दृष्टिकोण को सुदृढ़ रणनीतिक ढांचे, साक्ष्य निर्माण हेतु उपकरण और एक सक्षम बजटीय शासन ढांचे द्वारा सुदृढ़ता प्रदान की जाती है। विवेचना कीजिए।

Green Budgeting refers to the inclusion of environmental needs and outcomes in the budgeting process. Eg. setting Green GDP targets.

What will make Green Budgeting Effective?

1) A strong strategic framework: which involves preparation of vision/mission documents, inclusion of environmental aspects in all components (gender, revenue, etc.) budgets, devising long and short term plans for the role of environment in the various developmental process.

2) Tools for evidence generation:

→ For outcome management
→ Data driven goal setting in budget
→ Eg. Impact of government schemes on the Environment : Through EIA

3) An enabling budgetary governance framework
→ Sufficient funds allocated to environmental needs
→ Avenues of resource generation for Green Projects eg. through Green Bonds.
→ Cooperation with other federal units eg. States and decentralized local bodies

Uttarakhand recently decided to introduce Green GDP as an indicator of its development. Other states and the entire country must include environment as an inseparable part of the budgeting process.

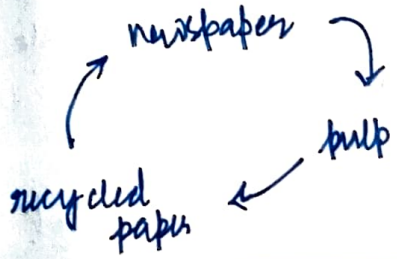
Don't write anything this margin
(इस भाग में कुछ ना लिखें)

2. State the need for circular economy in India and the challenges associated with it. Also, discuss the measures that are required to build a circular economy in India. **(150 words) 10**

भारत में चक्रीय अर्थव्यवस्था की आवश्यकता और इससे जुड़ी चुनौतियों का उल्लेख कीजिए। साथ ही, भारत में एक चक्रीय अर्थव्यवस्था के निर्माण के लिए आवश्यक उपायों पर चर्चा कीजिए।

Circular economy refers to the system of production and consumption where the outputs of a previous stage can be re-used as the input of a subsequent stage.

eg.



Need for circular economy in India

→ Burgeoning waste, especially e-waste : India is the 3rd largest e-waste producer in the world. A lot of waste consists of precious metals, etc. which can be reused.

→ Job creation : Circular economy can result in tremendous job creation in recycling, reusing, etc. facilities

→ Will result in cheaper raw material (especially Gold, Platinum, etc. used in electronics and reduce India's import bill.

Challenges associated

→ Informal economy: At present, the recycling sector is mostly informal
- → Uses primitive methods of extraction
- → exposure to toxic elements and gases

→ Logistical difficulties: transportation, collection, etc.

Measures

→ Onus on companies: Through strictly Extended Producer Responsibility Rules, etc.

→ Formalization of circular economy: Through loans, Production linked Incentives, etc.

→ Awareness campaigns: For segregation of garbage, etc.

India has historically been an economy that encourages recycling and reuse. It is time to formally endorse circular economies.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. The Major Port Authorities Act, 2021, seeks to grant greater autonomy and flexibility to the major ports and professionalise their governance. Discuss. (150 words) 10

प्रमुख बंदरगाह प्राधिकरण अधिनियम, 2021, प्रमुख बंदरगाहों को अधिक स्वायत्तता और लचीलापन प्रदान करने तथा उनके शासन को पेशेवर बनाने का प्रयास करता है। विवेचना कीजिए।

The Major Port Authorities Act, 2021 aims to regulate the administration of Major Ports (which come under the purview of centre) in India.

Features

→ Major Port Authority to be set up by the centre in consultation with stakeholders, to handle administration of each major port.

→ Greater autonomy to the Port Authority in decision making without having to take approvals for every minor decision from the centre.

→ Flexibility to the port authority in terms of

Don't write anything this margin (इस भाग में कुछ ना लिखें)

budget utilization, modernization, day to day administration of the port, etc.

How does the Act aim to professionalize governance?

→ Inclusion of industry professionals in the port authority.

→ Reduced role of bureaucracy in decision making for ~~p~~ major ports.

→ Financial autonomy can result in more efficient and productive operations

→ Flexibility in decision making will reduce red tapism and delays.

The Major Port Authorities Act, 2021 has given Major Ports sufficient autonomy so as to grow, develop, modernize and improve the Ease of Doing Business in the country.

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4. Analyse the need for shifting from presumptive land titling to conclusive land titling system in India. Also, highlight the hurdles in its implementation. **(150 words) 10**

भारत में अनुमानित भूमि स्वामित्व से निर्णायक भूमि स्वामित्व प्रणाली में स्थानांतरण की आवश्यकता का विश्लेषण कीजिए। साथ ही, इसके क्रियान्वयन में आने वाली बाधाओं को रेखांकित कीजिए।

Land titling refers to the formal identification of ownership of land of an individual.

→ Presumptive land titling: where land titling is done through historical land records, without clear demarcations, satellite imagery, etc.

→ Conclusive land titling: land titling that involves proper surveillance, observation, surveying and demarcation of land. This can be done through the use of drones, satellite imagery, etc.

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Need for conclusive land titling

→ Easier to use the land as collateral, also improves EoDB for banks.

→ Easier to resolve land conflicts due to digitized, comprehensive records.

→ Better data collection by the government
↳ for targeted scheme delivery

→ Easier process of transfer of rights to children

→ Easier land acquisition and consolidation process with remunerative prices for landholders.

→ Safer and easier buying / selling of lands

The PM SVAMITVA scheme, encouraging digitization of land records, is a positive step in this direction.

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5. What do you understand by methanol economy? Critically discuss its role in achieving India's energy security and economic prosperity. **(150 words) 10**

मेथनॉल अर्थव्यवस्था से आप क्या समझते हैं? भारत की ऊर्जा सुरक्षा और आर्थिक समृद्धि प्राप्त करने में इसकी भूमिका की समालोचनात्मक विवेचना कीजिए।

Methanol economy refers to the mainstream usage of methanol (CH_3OH) to meet the energy and economic needs of the country as an alternative fuel.

Methanol Economy

→ Use of Methanol as a fuel, alternative to / or used in combination with petrol, diesel, etc, in cars, buses, etc.

→ Using methanol as an alternative to coal due to its cleaner nature.

Role of Methanol Economy

→ Combating Climate Change
- ↳ Reducing the use of fossil fuels
- ↳ Generating methanol using renewable means

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- Methanol provides much lower SOx, NOx, etc. emissions.
- Promoting Methanol conversion to Green Hydrogen

→ Energy Security
- India imports >80% of its crude oil requirement
- Methanol usage can cause
  - Reduction in import bill
  - More policy certainty due to less fuel price fluctuation
  - Combat inflation

→ Economic prosperity
- Due to reduced import bill and inflation
- Cheaper alternative to crude oil
- Methanol production will generate employment opportunities.

Methanol economy, along with alternative fuels like Green Hydrogen, Ethanol, etc. can usher in economic prosperity and energy security and accelerate India's growth towards $5 trillion economy.

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6. Discuss the role of geospatial technologies in developing effective approaches for disaster risk reduction and disaster management. **(150 words) 10**

आपदा जोखिम न्यूनीकरण और आपदा प्रबंधन के लिए प्रभावी दृष्टिकोण विकसित करने में भू-स्थानिक प्रौद्योगिकियों की भूमिका की विवेचना कीजिए।

Geospatial technologies involve the application of technology to study geospatial data, i.e., data dealing with the demographics, physical structures, etc. of a location.

Geospatial Technologies for Disaster Risk Reduction

→ Early Warning Systems: Geospatial mapping and monitoring of landslide prone areas, weather forecasting through doppler radars, etc., river water monitoring, etc.

→ Location-specific Action Plans: Geospatial mapping and mitigation strategy development in heat-wave, cold-wave prone areas, earthquake and cyclone prone areas, etc. Eg. based on geospatial data, preparedness and evacuation plans have

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reduced loss of life in Cyclones Amphan and Fani.

→ In line with the Sendai Framework for Disaster Risk Reduction.

Geospatial Technologies for Disaster Management

→ Real time analysis of evacuation routes and plans (useful during earthquakes and floods)

→ Damage estimation using GPS and drone technologies

→ Rebuilding climate and disaster resilient infrastructure.

Geospatial technologies can play a major role in disaster mitigation and response. The liberalised geospatial technology rules are a positive step in this direction.

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7. The focus of Environmental Impact Assessment (EIA) needs to shift from utilization and exploitation of natural resources to conservation of natural resources. Discuss. **(150 words) 10**

पर्यावरणीय प्रभाव आकलन (EIA) का मुख्य ध्यान प्राकृतिक संसाधनों के उपयोग और दोहन से हटाकर प्राकृतिक संसाधनों के संरक्षण पर केंद्रित होना चाहिए। विवेचना कीजिए।

Environmental Impact Assessment refers to the consultative process of assessing the risks, impacts and alternatives to any project with respect to the environment.

EIA-2006 : The Focus

→ At present, the various stages of EIA, viz. screening, scoping, etc. mostly concentrate on the utilization and exploitation of natural resources. We answer questions like:

- What ~~with~~ resources of the environment will the project exploit? (like forests, etc.)
- What will the impact of the project be on the natural resources?
- What compensations must be given by the stakeholders against their exploitation?

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→ There is a need to adopt a more conservation oriented approach to the EIA.

We need to answer questions like

- What can be done by the project to conserve the surrounding environment?
  ↳ Eg. through green belting, joint forest management, etc.
- How can the project's stakeholders and the people living in that area minimize the project's impact and encourage conservation in the area?

→ Such a positive approach towards EIA would result in a joint approach of both the people as well as the project stakeholders in conservation.

While EIA is an important tool to balance development with environment, we must ask the right questions and move towards 'Environmental Resource Management'.

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8. What do you understand by hybrid warfare? Discuss India's preparedness in this context. (150 words) 10

हाइब्रिड वारफेयर से आप क्या समझते हैं? इस संदर्भ में, भारत की तैयारियों की विवेचना कीजिए।

Hybrid warfare refers to a multidimensional aspect of warfare, where hostility takes various shapes and forms, like direct combat, proxy war, terror funding, etc. all at the same time.

Characteristics of Hybrid Warfare

→ Creation of internal instability: through terror funding, separatists, misinformation, etc. eg. Pakistan's terror funding in Kashmir.

→ Use of technology: To carry out cybercrime, tap intelligence, etc.

→ Narco Terrorism: Which is imperative for India to control, since it is surrounded by 'Golden Triangle' and 'Golden Crescent'.

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India's Preparedness towards hybrid Warfare

→ Superior intelligence agencies: The Intelligence Bureau, Research and Analysis Wing, etc. use state of the art techniques to manage intelligence and security.

→ Use of technology: through drones, X Ray scanners to prevent smuggling, etc.

→ Improvement of border infrastructure: Especially North-East Border with Pakistan, through CCTVs, etc.

→ Investigation Agencies: Eg. NIA, which is capable of handling hybrid warfare cases since acts like UAPA, NDPS etc. fall under its jurisdiction.

While India is somewhat prepared to handle hybrid warfare, more steps must be taken to prevent narco terrorism, identify in-state terror syndicates, enforce PMLA/FEMA effectively, etc.

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9. Discuss the challenges associated with inclusion of women in armed forces, particularly in combat roles in India. How can these challenges be addressed? **(150 words) 10**

सशस्त्र बलों, विशेष रूप से भारत में युद्धक भूमिकाओं में महिलाओं को शामिल करने से संबंधित चुनौतियों पर चर्चा कीजिए। इन चुनौतियों का समाधान कैसे किया जा सकता है?

The Indian Armed Forces have largely been male-dominated, with women taking up roles mainly secondary, like doctors, cooks, etc.

Challenges to inclusion of women in armed forces

→ Societal challenges

- → Patriarchal Indian society where women are considered the non-combative 'weaker sex'.
- → Concerns with safety and security due to rising crimes against women.
- → Early marriages and child bearing age which hinders female participation.

→ logistical challenges

- ↳ Poor/unsupported infrastructure for women in army areas, including barracks, toilets, etc.

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↳ lack of training | sensitization among the present armed forces

How these challenges can be addressed

- → creation of female-friendly infrastructure in the armed forces on war-footing.
- → encouraging and spreading awareness about the role armed forces can play for women's lives upon their participation
- → Having a robust and fair recruitment process with reservation for women

→ The recent Supreme Court judgement allowing Permanent Commission for women in armed forces is a positive step.

The INA had a 'Rani Jhansi Regiment' which gave us brilliant fighters like Capt. Laxmi Sehgal. If women's participation was encouraged back then, why stop now?

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10. S. Chandrasekhar was one of the greatest scientists of the 20th century whose prolific contributions spanned across astrophysics, space and mathematics. Elaborate. **(150 words) 10**

एस. चंद्रशेखर 20वीं सदी के महानतम वैज्ञानिकों में से एक थे, जिनका खगोल भौतिकी (एस्ट्रोफिजिक्स), अंतरिक्ष और गणित के क्षेत्र में विपुल योगदान था। सविस्तार वर्णन कीजिए।

Subramanian Chandrashekhar's contributions to the field of astrophysics, science and mathematics have been instrumental in our current understandings of stars and black holes.

→ Chandrashekhar limit : considered his most important contribution, it talks about a star in the final stage of its life.

Mass of a star → > Chandrashekhar limit ? ↓ Forms Black Hole

↓

< Chandrashekhar limit

↓

Does not form Black Hole

→ Study of evolution of stars

S. Chandrashekhar provided immense research on the formation, evolution and death of stars. ~~Star~~

→ Apart from astrophysics, S Chandrashekhar ~~to~~ contributed to the field of science ~~through his physics~~ and mathematics ~~as~~ as ~~the~~ well.

Sir S Chandrashekhar can be considered to the likes of Albert Einstein in his contributions to the field of astrophysics. He truly was one of the most prolific scientists the ~~world~~ world had seen in the 20th century.

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11. State finances in India present a worrying picture, with debt sustainability being a major concern. Discuss in context of the recent RBI report on state finances. **(250 words) 15**

भारत में राज्य वित्त एक चिंताजनक स्थिति प्रस्तुत करता है, जिसमें ऋण संधारणीयता एक प्रमुख चिंता का विषय है। राज्य वित्त पर आर. बी. आई. की हालिया रिपोर्ट के संदर्भ में विवेचना कीजिए।

COVID-19 pandemic has put a deep strain on ~~state~~ the account books of states, and debt sustainability has become a major concern.

Overall Picture and Reasons

→ The Debt to GDP ratio for many states has exceeded 50%.

→ States are increasingly resorting to borrowings, some of which are extra budgetary in nature, eg. Telangana.

→ Populist schemes and freebie culture are putting immense stress on state finances

↳ Eg. Free electricity upto a limit : A campaign promise in Punjab

↳ Eg. Free rides for women in buses in Delhi

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→ Low tax collections : Due to COVID-19 related lockdowns. Only recently have the GST collections stabilized.

→ GST Compensation issue : While the centre used an escape clause to reduce payments to the states.

→ Delayed payments by centre for centrally sponsored schemes like MGNREGA.

→ Rising inflation : Especially imported inflation in crude oil which is forcing centre and states to cut taxes on fuel stressing their fiscal capabilities.

Way Forward

→ The centre must clear the state dues as soon as possible

→ The GST compensation to states must be continued for a few more years to

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help with states finances.

→ Extra budgetary borrowings must be discouraged and must be adequately scrutinized through audits.

→ The centre must disallow states from taking external loans beyond a limit.

→ Freebie culture must be discouraged.

→ Tax net should be widened and tax evasion must be curtailed further.

The stressed fiscal capacity of states can result in crowding out of investment, thus creating a vicious cycle. The aforementioned steps are must to move back to the path of fiscal prudence.

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12. The Indian experience provides several lessons of an inclusive digital economy model that enables formal digital governance structure at a low cost and with easier access. Discuss. **(250 words) 15**

भारतीय अनुभव एक समावेशी डिजिटल अर्थव्यवस्था मॉडल के कई सबक प्रदान करता है जो कम लागत पर और आसान पहुंच के साथ औपचारिक डिजिटल शासन संरचना को सक्षम बनाता है। विवेचना कीजिए।

Since the Digital India Mission, India has seen huge strides towards digitization and an inclusive digital economy, with efficient eGovernance delivered at a low cost.

India's Digital Economy Model

→ Conducive Telecom Policy: The push towards digitization by the Digital Communications Policy: made the commercial environment conducive for growth of telecom industry: resulted in cheap and accessible data rates.

→ Push towards last mile connectivity: Through Digital India Mission's components:

↳ Increasing fiber optic connectivity

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- Network infrastructure in rural areas
- eKrantri mission
- PM WANI's principle

→ Promoting eGovernance :

- Digitization of land Records (SVAMITVA)
- UMANG App
- Corporate governance : ~~Eh~~ MCA21 portal
- Electronic generation of eWay Bill, etc.

→ Encouraging digital payments

- UPI Model
- Proposed ONDC for Digital Commerce
- RBI's Digital Payments Index.

→ ~~Eto~~ Encouraging financial inclusion

- PM Jan Dhan Yojana
- Adhar Enabled Payment System
- JAN-Adhaar Mobile Trinity

Issues with India's digital economy model

→ Financial inclusion : Not 100%, and many users are switching back to old ways.

→ Digital illiteracy

→ Rising cybercrime

→ Lack of access to smartphones

→ Poor internet connectivity, especially in rural areas.

India has led the way in the world's transition to digital governance. It is imperative that we also include the left-out population on our next train to digitization.

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13. Dairying is a viable livelihood option for a large section of the population. In this context, discuss the significance, challenges faced and associated government initiatives for the dairy sector in India. (250 words) 15

डेयरी व्यवसाय, आबादी के एक बड़े हिस्से के लिए आजीविका का एक व्यवहार्य विकल्प है। इस संदर्भ में, इसके महत्व, विद्यमान चुनौतियों और भारत में डेयरी क्षेत्र के लिए सरकार द्वारा की गयी पहलों की विवेचना कीजिए।

India is the largest producer, consumer and exporter of milk, with over 25% of world's milk supply coming from India. Dairying has historically been, and continues to be a viable livelihood option in India.

Significance

→ Improving farmer's income : Helps in additional income generation towards our goal of doubling farmer's income.

→ Risk offset : Acts as an insurance against crop related risks since it is an additional source of income.

→ Nutrition: In line with POSHAN 2.0 which aims in improving nutrition capacity, since milk, curd etc. is a good source of calcium and Vitamin A

→ Cooperatives: like Amul, have ushered in the white revolution and increased the per capita availability of milk.

→ Export industry is encouraged.

→ Food processing industry (milk powder, curd, paneer, etc.) gets a much needed push.

Challenges

→ Inadequate infrastructure: Cold storage facilities, poor cold-chains, etc. which is harmful because dairy products are perishable.

→ Lack of private participation: Most of the dairy industry is subsistence-based.

→ Use of antibiotics: leading to antimicrobial resistence.

→ Use of growth hormones

→ Diseases like anthrax, brucellosis, foot and mouth disease

→ Inhuman treatment to animals

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→ Desi breeds losing shine to foreign breeds

Government Initiatives

→ Rashtriya Gokul Mission (For scientific breeding/welfare)

→ PLI Scheme for food processing industry

→ Agricultural Infrastructure Fund (For warehousing/cold storage)

→ e Gopala App, Gobar Dhan Scheme
↳ For semen samples, artificial insemination, etc.

→ PM Kisan Sampada Yojana for food parks (including dairy)

The recent steps by the government indicate that we are moving in the right direction in promoting and modernising the dairy industry, a step that can be instrumental in improving farmers income.

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14. The imperative to increase farmers' income must shift to creating value chains and must not be reliant on the MSP regime and subsidy bias prevalent in the current Indian agricultural system. Examine. **(250 words) 15**

किसानों की आय बढ़ाने की अनिवार्यता को मूल्य श्रृंखलाओं के सृजन से जोड़ा जाना चाहिए और इसे वर्तमान भारतीय कृषि प्रणाली में प्रचलित एम. एस. पी. व्यवस्था एवं पूर्वाग्रहयुक्त सब्सिडी पर कतई निर्भर नहीं होना चाहिए। परीक्षण कीजिए।

The recently repealed Farm Acts have once again brought the issue of utility of Minimum Support Price (MSP) regime and subsidy bias in limelight.

MSP Regime and Subsidy Bias: Issues

→ Discourages diversification
↳ Farmers tend to grow more rice, wheat, etc which are procured by the state
↳ Results in shortage / inflation of fruits, vegetables, etc.
↳ Hampers India's nutritional security

→ Stress on resources
↳ Rice requires huge quantities of water
↳ MSP encourages growth of such

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water intensive crops.

→ Stress on state's fiscal capacity

↳ Huge procurement costs

↳ Results in lack of funds for supply chain improvement and management.

→ used as a populist tool

→ Reduces market's role in price discovery and ultimately reduces India's export competitiveness.

→ Fertilizer subsidy: Harmful for soil and environment.

[What steps can government take instead?]

We need to truly empower the farmer by creating value chains:

→ Improving farm gate infrastructure: Better and cheaper transportation / warehousing facilities.

Eg. Kisan Rail
Agriculture Infrastructure Fund

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→ Encouraging Farmer Producer Companies: Through soft loans and capital. Also improving their linkages with markets.

→ Encouraging food processing industry
- ↳ Creation of food parks
- ↳ Encouraging secure contract farming

Eg. PM Kisan Sampada Yojana: Mega Food Parks, Forward and Backward linkages, etc.

→ Diversifying farmer income sources: Encouraging animal husbandry and rearing, cottage industry through cooperatives, self help groups etc. (eg DAY-NRLM).

While there has clearly been a shift in the government's stance from subsidy bias ~~and~~ to value chain improvement, the aforementioned steps are important to empower farmers and double their income.

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15. What are the challenges in ensuring sustainable river management in urban areas? Highlight the remedial measures that can be taken for river management with a special focus on the recently launched River Cities Alliance. **(250 words) 15**

शहरी क्षेत्रों में संधारणीय नदी प्रबंधन को सुनिश्चित करने में कौन-सी चुनौतियाँ विद्यमान हैं? हाल ही में प्रारंभ रिवर सिटीज एलायंस पर विशेष ध्यान देते हुए नदी प्रबंधन के लिए किए जा सकने वाले उपचारात्मक उपायों को रेखांकित कीजिए।

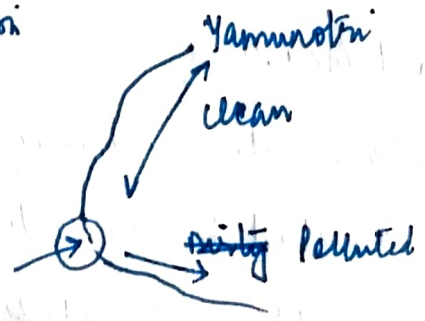
History shows that civilizations have formed around rivers. Today, many of these regions have developed into sprawling urban areas with overpolluted and shrinking rivers.

Challenges in Sustainable River Management in Urban Areas

→ Inadequate monitoring : of pollution levels, BOD, COD, etc.

→ Pollution from industry : Especially garment, pharmaceutical Industry that result in heavy river pollution

Yamuna facts severe pollution from Delhi



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↳ untreated antibiotics from pharma companies and animal waste causes growth of antimicrobial resistant bacteria.

↳ Hot water and untreated chemicals from textile industry cause damage to aquatic life.

→ Unsustainable human practices

- ↳ Leachant from garbage dumps enters rivers
- ↳ Unsanitary drains meet the rivers
- ↳ Religious practices like throwing of ashes into the sea, etc.
- ↳ Washing of clothes, defecation near river bodies, etc.

→ Remedial Measures

The River Cities Alliance has recently been launched by the Central Government as a coalition of waterfront (riverfront)

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cities that jointly would aim to improve sustainable river management and promote tourism, etc.

- Joint approach to management

→ Cities along a river eg. Varanasi, Prayagraj etc. (and its tributaries) must jointly aim to:

- impose industrial restrictions
- encourage sustainable ~~river~~ religious practices
- carry out riverfront management and development
- Enforce heavy fines for violation

→ Cleanup and revival of drains eg. Najafgarh drain in Delhi, which meets the Yamuna.

The Namami Gange Programme (with components like 'Nirmal Dhara', 'Aviral Dhara' etc.), along with 'River Cities Alliance' are essential for our joint effort towards Sustainable River Management.

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16. Haphazard growth and poor management make the Indian cities the locus of disasters, both large and small. Comment. Also, discuss the current gaps in policies in addressing these challenges. **(250 words) 15**

अव्यवस्थित विकास तथा निम्न स्तरीय प्रबंधन ने बड़े और छोटे दोनों प्रकार के भारतीय शहरों को आपदाओं का केंद्र बना दिया है। टिप्पणी कीजिए। साथ ही, इन चुनौतियों का समाधान करने में नीतियों में विद्यमान वर्तमान अंतराल पर चर्चा कीजिए।

Indian cities have long-suffered from challenges like pollution, over population, unplanned development, etc. These have aggravated to result in disasters in the 21st century.

Haphazard Growth, and poor management resulting in disaster

→ Huge influx of migrants: Resulting in slum formation (>30% of Delhi's population lives in slums) and unsanitary living conditions, resulting in disasters like dengue outbreaks, unequal impact of urban flooding, etc.

→ lack of implementation of building codes: Resulting in unsafe construction, fire prone buildings, etc. Eg. a recent fire in a building in Delhi's Mundka killed scores of people: there was lack

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of fire safety provisions in the building.

→ Poor management of drainage: Rains in Mumbai bring the city to a standstill every year, urban flooding in Hyderabad, Chennai, etc.

→ No proper rehabilitation plans for slum residents.

→ ~~Lack of~~ Increasing crime rates and insecurity due to overpopulation.

→ lack of proper pollution management plans resulting in ~~huge~~ pollution spikes in winter in cities like Delhi

Examples of Recent Disasters

→ Fire in coaching centre in Hyderabad, hotel in Delhi, etc resulting in many deaths.

→ Urban flooding: Hyderabad, Chennai

→ Floods in Mumbai due to incessant rains

→ Gas leak in Styrene Plant (Vizag)

→ Air pollution in October in Delhi.

Current Gaps

→ Inadequate finances to urban local bodies for

- Improving fire response / safety
- Implementing building code
- Rehabilitation of slum dwellers
- Revamping the drainage system
- Improving pandemic preparedness

→ Inadequate steps by centre and state governments for

- Pollution management (requires inter-state coordination)
- Urban mobility enhancement
- Reducing migration to urban areas

With over 50% of India's population expected to be living in cities by 2050, India must fill gaps in its urban management policies and promote decentralization in urban local bodies.

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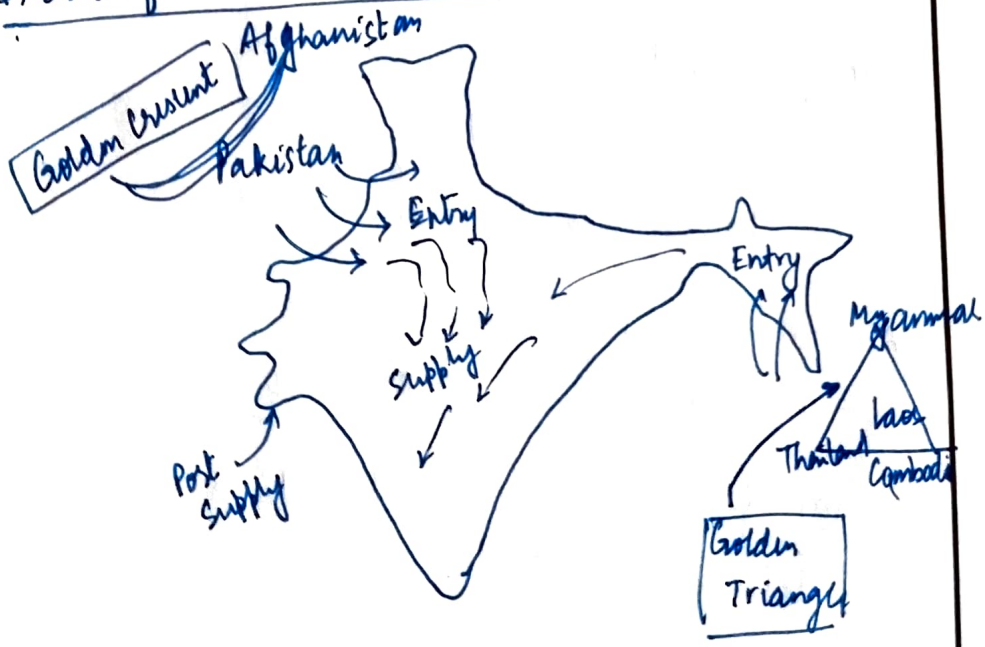
17. Discuss the extent of the problem of narco-terrorism in India. What measures have been taken by the government to counter and control this problem? **(250 words) 15**

भारत में नार्को-आतंकवाद की समस्या के प्रसार पर चर्चा कीजिए। इस समस्या से निपटने और नियंत्रित करने के लिए सरकार द्वारा क्या उपाय किए गए हैं?

Narco terrorism refers to the smuggling and distribution of narcotic drugs in a region by external or internal elements hostile to the state, in order to launder money, fund terrorism and cause internal instability.

Extent of narco-terrorism in India



→ India is surrounded by the Golden Triangle (Myanmar, Laos, Cambodia) to the East which supplies drugs to the North Eastern Region

→ The Golden Crescent in the west (Pakistan, Afghanistan) ensures smuggled supply in Punjab-Rajasthan region.

→ Hence the problem is disproportionately high in the Northern and North Eastern region, and drugs are then domestically supplied to the rest of the country.

→ The money earned is used to fund terror activities and cause instability in the region by hostile elements like Pakistan.

→ Ports: Are increasingly becoming entry points of drugs. Recently, cocaine worth 3000 crore rupees was found in a shipment entering a private port in Gujarat.

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→ Target demographic: Youth from vulnerable backgrounds and rural areas are the major target in Punjab and Haryana. Urban areas too are a target.

Steps by the government

→ Improved intelligence network through technology eg. Belt X Ray scanners at airports, CCTVs, etc.

→ Strengthening of Narcotic Drugs and Psychotropic Substances Act

→ NIA's jurisdiction: NDPS Act, UAPA Act, etc.

→ Modernization of technology used by R&AW, IB, etc.

→ Border infrastructure development (especially with Pakistan).

→ Increased post-shipment scrutiny

→ Narco terrorism destroys lives of lakhs of youth in the country. The government must address this issue on war footing and call for international cooperation for the same.

18. The dark web can be an ideal platform for several criminal and terrorist activities. Discuss with examples. Also, suggest measures to tackle the misuse of dark web. **(250 words) 15**

डार्क वेब कई आपराधिक और आतंकवादी गतिविधियों के लिए एक आदर्श मंच हो सकता है। उदाहरण सहित चर्चा कीजिए। साथ ही, डार्क वेब के दुरुपयोग से निपटने के उपायों का सुझाव दीजिए।

Dark Web refers to the part of the internet that is not indexed by search engines and is placed under ~~multi~~ multiple layers of encryption. It has become a hotbed of criminal activities.

How the Dark Web is the ideal platform ~~of~~ for Criminal | terrorist activities

→ Difficult to track and maintain surveillance
Due to the layers of encryption, governments cannot track usage and activity on the dark web. It cannot identify the person behind the activities.

→ Can be internationally controlled: The government cannot ban access to these sites because users can access them through special means like

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(इस भाग में कुछ ना लिखें)

VPN and Tor Browser.

→ Examples of criminal activity on dark web

1. ~~Drug~~ Drug Trafficking : 'Silk Road' Website
2. Child abuse and pornography
3. Illegal weapons sales
4. Personal information databases of people
5. Animal abuse

Measures to tackle misuse of dark web

→ Global Coordinated Effort

Through a consensus based regulation of dark web, especially in countries that are a hotbed of dark web activities, like Russia, Eastern European Countries, etc.

→ Awareness and citizen-based policing

Citizens must be made aware of the vagaries of dark web and

should be encouraged to report any instances of criminal activity freely without any fear.

→ Intelligence Agencies: like R&AW and Intelligence Bureau should keep a check on Dark Web activities and conduct sting operations to thwart domestic criminal activities.

→ Statutory backing:
The illegal use of Dark Web should be included in Indian laws like the UAPA Act, NDPS Act, Draft Personal Data Protection Bill, etc.

Dark web based criminal activities are an emerging challenge that have the potential to wreak havoc in the country. The government must adapt to this increasingly real ~~threat~~ threat.

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(इस भाग में कुछ ना लिखें)

19. What is catalysis? Highlight the characteristics of catalysts. Also, elaborate why catalytic reactions are important for human beings. (250 words) 15

उत्प्रेरण क्या है? उत्प्रेरकों की विशेषताओं पर प्रकाश डालिए। साथ ही, उदाहरण प्रस्तुत करते हुए समझाइए कि मानव के लिए उत्प्रेरकी अभिक्रियाएं क्यों महत्वपूर्ण हैं।

A catalyst is a substance that can control the rate of a reaction without itself taking part in it. Catalysis refers to the process of reactions in the presence of a catalyst.

Characteristics of Catalysts

→ usually inert to the reactants : Catalysts themselves are mostly unreactive. They do not combine with the reactants to form the final product. Eg. Platinum in Catalytic Converters

→ Provide substrate for reaction : sometimes catalysts act as the substrate on which reaction takes place. They may aid in adsorption / absorption, etc. Eg. Activated Charcoal is used as an adsorbent catalyst in many places.

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→ Usually accelarate or 'kick start' the reaction: They alter the kinetics of the reaction.

→ Organocatalysis: Usually, metal catalysts are used for many reactions. The generally are precious metals like Platinum and Palladium.

However, metals generally do not react in an organic environment. Organocatalysis plays a role here and uses organic compounds as catalysts. The Nobel Prize in Chemistry in 2021 was awarded to scientists who studied the process of organocatalysis.

[Importance for human beings]

Catalytic reactions are all around us.

→ Inside the human body: Various reactions involving transport of nutrients, digestion,

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(इस भाग में कुछ ना लिखें)

assimilation, etc. are catalyzed, mostly by organic compounds.

→ Catalytic converters : use Pt to convert harmful gases into elemental gases in cars.

→ Plastics, organic compounds, polymers
Are all formed due to catalyzed reactions.

→ Medicines : many pharmaceutical work on the principles of catalysis

→ Quicker manufacturing of ~~which~~ organic compounds through catalysts like Pt Gauze, Rh, etc.

~~In today's world, cata~~

Catalysts have been in use since time immemorial. They have immense significance in our lives and call for extensive research in this field.

Don't write anything in margin (इस भाग में कुछ ना लिखें)

20. Electric mobility offers solutions to the problems associated with climate change, growing fuel prices, and urban transportation issues. Discuss in the context of India. (250 words) 15

इलेक्ट्रिक मोबिलिटी जलवायु परिवर्तन, ईंधन की बढ़ती कीमतों और शहरी परिवहन के मुद्दों से जुड़ी समस्याओं का समाधान प्रदान करती है। भारत के संदर्भ में चर्चा कीजिए।

Electric Mobility refers to the use of electricity as a fuel to power the transportation sector. It involves the use of electric cars, buses, rickshaws, etc.

Electric Mobility : A boon for India

→ Combating Climate Change

(i) Use of renewable energy to charge batteries eg. solar energy
↳ India is well endowed with renewable energy options (40% of India's energy basket)

(ii) Decreases fossil fuel usage
↳ Results in lower NO_x, SO_x pollution,
↳ Reduces CO_2 emissions

Good for India, which sees huge pollution

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problems in cities (eg. Delhi, Kolkata) and is also suffering under the impact of climate change (eg. Heat waves in North India, 2022)

Growing Fuel Prices

(i) Reduces ~~imp~~ import bill : Since India imports ~80% of its fuel needs

(ii) Reduces inflation : Since higher fuel prices cause an important increase in inflation

(iii) Reduces uncertainty in fuel prices : Due to the imported inflation and fluctuating fuel prices, India faces uncertainty in inflation and makes policy making more difficult.

Urban Transportation Issues

(i) Pollution : Fossil fuel based transportation causes NO_x, SO_x, O_3, NH_3, etc. ~~emissi~~ emissions causing

- → Pollution
- → Photochemical smog

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EVs will help reduce air pollution and deaths due to lung related disease.

(ii) Sustainable Urban mobility: Through electric rickshaws, buses (as seen in Delhi), metro, etc.

Electric Mobility: Initiatives

→ FAME-II Scheme
→ PLI scheme for battery
→ Solar Energy subsidies
→ Tax incentives on EVs
etc.

The government has shown a great push towards electric mobility. With such initiatives, we might be able to phase out conventional engine vehicles altogether by 2050.